Effigy Mounds National Monument
Cultural Affiliation Report

Volume I

by
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Chapter 1. Project Description and Goals

by William Green

The following report is a Cultural Affiliation Report for Effigy Mounds National Monument (EFMO). It has been prepared in accordance with a request for proposals and Scope of Work issued by the National Park Service, Midwest Support Office, Omaha, Nebraska, on November 9, 1998 (Requisition/Purchase Request No. 6068-9-0001).

On December 3, 1998 the University of Iowa submitted a proposal to the Midwest Support Office in response to the request for proposals. Co-Principal Investigators William Green and Larry J. Zimmerman of the Office of the State Archaeologist and the American Indian and Native Studies Program, respectively, prepared the proposal. The National Park Service accepted this proposal via a Notice of Award – Notice to Proceed on February 12, 1999.

The Scope of Work (see Appendix A) specifies the purpose of the study:

> The purpose of this study is to determine whether prehistoric, historic and contemporary affiliations exist between American Indians and the land and natural and cultural resources within the monument and to document and analyze any affiliations identified. While the major emphasis of the solicitation is on the land and resources within the Monument boundaries itself, it is understood that it will be necessary to focus on regional rather than park-specific research data and materials to accomplish this task.

> The study will identify any groups who have both traditional and contemporary ties specifically to the Monument resources and region, describing relationships between park land and natural and cultural resources and associated past and present peoples.

> The results of the study will 1) prepare managers to anticipate resource use issues that may affect their park, and place them in a better position to understand and deal with such issues in the future, and more immediately, 2) provide managers with the necessary information to address the cultural affiliation and consultation requirements of the Native American Graves Protection and Repatriation Act (NAGPRA) and other legislation, policy, and regulations that address peoples traditionally associated with park resources.

The Scope applies the National Park Service definition of a cultural affiliation report:

> The NPS defines a cultural affiliation report to be a study that establishes relationships between objects in park collections, or other resources, and descendants of individuals whose remains or objects are in park collections. Such studies are required to meet the data and consultation requirements of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (Public Law 101-601; 104 Stat. 3048; 25 USC 3001 et seq.) and other legislation, policy, and regulations that address peoples traditionally associated with park resources.

The Scope also requires the following for the EFMO cultural affiliation report:

The study will review existing information and identify new data needs… Information is to be derived from existing archival and published materials and may be supplemented (where appropriate) with ethnographic interviewing of knowledgeable members of traditionally associated groups. However, the Contractor needs to consult with the COR prior to contacting tribal representatives to determine if such interviews are really pertinent to this study.

This study will identify through ethnohistorical review of published and uinpublished literature and records, 1) the native people who were present during prehistoric and historic time periods in the region encompassing Effigy Mounds National Monument; and 2) the contemporary Federally-recognized American Indian tribes that are possibly descended from people who were prehistorically and historically resident in the region, as well as other Federally-recognized tribes and unrecognized American Indian groups for whom the park is important today. On these bases, the relationship of Native American peoples to the land, resources, and collections within this park will be detailed. Information about present tribal governments and officials with links to the park resources, will also be presented.

Specifically, the objectives of this study are to provide:

* descriptions of any American Indian groups who may be determined to be culturally affiliated with the Monument and its resources. Included should be the following summaries: 1) Summarize the relationships determined between mound builders and contemporary Indian groups; and 2) Summarize the relationships determined between specific objects (including human remains) in park collections to contemporary Indian groups or individuals who may be descendants; and 3) Summarize the relationship determined between other park resources to contemporary Indian groups; and

* a comprehensive summary of the cultural history of each of the potentially affiliated groups; and

* descriptions of occupation and use, past and present (prehistoric and historic), of the area in and around the Monument by traditionally associated groups of people; and

* descriptions of potentially existing rights arising from treaties, agreements, and laws; and

* a current "selectively annotated" bibliography of ethnographic information on Effigy Mounds National Monument and traditionally associated peoples; and

* a references section of sources cited in the final report; and

* a record of consultations (if applicable) with American Indians and other members of traditionally associated groups whose lifeways and cultural resources may be affected by park management plans and actions; and

* suggestions for further studies on Effigy Mounds National Monument associated groups and resources which may be designed and conducted to develop more complete information on which to base future decisions by the Monument Superintendent with regard to ethnographic issues and concerns that have the potential to affect management of the Monument resources.

Finally, if potential interpretive topics can be gleaned from the research, such topics should be included in the final report as a product of this study.

The Scope also directs the study to include references to numerous and diverse archaeological, historical, and ethnographic sources. Specific sources to be consulted and evaluated are the series of expert testimony reports presented to the Indian Claims Commission between 1946 and 1978 and published by Garland Publishing Company. The study is also required to contain "a map or maps containing information regarding all ceded lands, treaty boundaries, park boundaries, and natural resources' locations within these boundaries."

The purpose of this cultural affiliation report, therefore, is to examine and establish relationships between the resources at EFMO and prehistoric, historic, and contemporary American Indians. This work requires a regional perspective. The University of Iowa additionally established as part of its purpose in this project to prepare a professional anthropological document that will be useful not only to the National Park Service but to the broader anthropological community, Indian peoples, and the general public.

This report is organized as follows:

Chapter 2 presents the research design and discusses the methods used in the study and in report preparation. It also includes brief evaluations of the efficacy of these methods.

Chapter 3 describes EFMO resources and defines a larger study region as well, to provide readers with information on the local resources of key concern and the broader contexts within which they occur. This chapter includes maps linked to data tables on Indian treaties and ceded lands. It also contains a history of archaeological excavations at EFMO and a comprehensive description of the contents (human remains, funerary objects, etc.) of each excavated mound within the Monument, information which is vital to understanding the ages and possible cultural affiliations of these resources.

Chapter 4 presents an archaeological overview of Indian cultures in the study region, except the Effigy Mound culture, organized chronologically from the earliest known peoples into the Historic period. Chapter 5 presents historical information on the American Indian groups who occupied the study region and nearby areas in the Historic period and who may be culturally affiliated with EFMO and its resources.

Because Effigy Mound is the prehistoric culture that forms the Monument's identity, and as Effigy Mound cultural affiliation has become a complex issue, Chapters 6, 7, and 8 are devoted solely to that culture. Chapter 6 presents a history of research on Effigy Mound, Chapter 7 evaluates the status of bioanthropological research on Effigy Mound peoples and its potential in analysis of cultural affiliation, and Chapter 8 discusses Effigy Mound cultural affiliation in historical perspective and provides an integrative model of regional culture history that can aid in determination of possible Effigy Mound cultural affiliation.

Chapter 9 presents conclusions and suggestions for further study and consultation.

The chapters are followed by the references cited and annotated ethnographic bibliographies, and several appendixes: (A) the Scope of Work, (B) our comprehensive data base with information on each site and mound, (C) lists of interview questions, (D) information from interviews regarding EFMO resources and possible cultural affiliations, and (E) copies of relevant treaties. Appendix E in the CD version of the report and in the limited-distribution Volume II of the print edition contains full copies of treaties. The standard print edition consists of Volume I only, in which Appendix E contains the list of treaties but not their full texts, which are available online.

All information presented and all opinions and conclusions expressed in this report are solely those of the authors and do not necessarily represent the viewpoints of the National Park Service or of any individuals or organizations mentioned in the report or consulted during the research.

Chapter 2. Research Design and Methods

by William Green and Larry J. Zimmerman

RESEARCH DESIGN

Research for this study was guided by the requirements of the Scope of Work (see Chapter 1 and Appendix A) and by a research design the authors submitted with their proposal. The principal elements of this research design, modified as appropriate to account for the conditions encountered during the study, are described below.

The methodological framework for this study employs two key concepts: (1) in establishing spatial contexts, the resources and the study region are best understood using a cultural landscape model, and (2) establishing cultural contexts and studying cultural affiliation require recognition of inherent complexities in social and cultural history that favor employment of an ethnogenesis model of group identity.

Cultural landscape model

The resources of EFMO and the study region are elements of a cultural landscape. A cultural landscape is a geographic area, including both natural and cultural resources, associated with a historic event, activity, or person (NPS 1994:94). The cultural landscape concept has been an effective means of emphasizing connections and integration among resources whose meaning and significance add up to more than the "sum of their parts." Cultural landscapes have proven to be useful constructs and concepts in a wide variety of scholarly and applied anthropological research settings (e.g., Hirsch and O'Hanlon 1995; Stoffle et al. 1997).

Mounds, habitation sites, and artifacts form archaeological elements of the EFMO cultural landscape. Other elements include the waters of the Mississippi River and its tributaries, the geologic features and landforms in and around the Monument, the local vegetation and animal life, and the vistas available from several vantage spots. The convergence of significant natural and cultural resources in the study region formed a major focus of the work conducted by R. Clark Mallam in the 1970s and 1980s (e.g., Mallam 1976a, 1982a, 1982b, 1983, 1984). Much of Mallam's work was characterized by an interest in understanding the interactions of culture and nature within the cultural landscape of northeastern Iowa. This integrated approach is worthy of continued development.

Cultural affiliation and ethnogenesis, and group continuities

NAGPRA defines cultural affiliation as "a relationship of shared group identity which can be reasonably traced historically or prehistorically between a present day Indian Tribe or Native Hawaiian organization and an identifiable earlier group" (Public Law 101-601, Section 2(2)). Tracing of group identities from modern or historic-era Indian tribes to earlier groups identified through archaeology has been a goal of the "Direct Historical Approach" for many decades (e.g., Wedel 1938). Although the Ioway–Oneota (Orr focus) relationship in northeastern Iowa has been suggested and supported for over 60 years (Mott 1938), relating earlier archaeological complexes to present day groups is not as straightforward. For Woodland peoples in particular, a straight-line, direct ancestry approach oversimplifies both the form of the cultural landscape 1000–2500 years ago and the relationships between those peoples and present day groups.

A more appropriate model recognizes that processes of *ethnogenesis* have operated throughout human history. Ethnogenesis refers to the processes of group identity formation, recognizing (1) that human groups have always interacted, (2) that social, cultural, ethnic, and other identities are formed through group fusion, and (3) that human biology, languages, and cultures do not necessarily covary to comprise a discrete package that can be labeled group identity. Hall noted 50 years ago that "there is no reason inherent in nature for a language to remain associated with material culture or physical type as the latter are traced back into the ages" (Hall 1950:7), and Gibbon affirmed that "contrary to the assumptions of many archaeologists, neither language nor ancestry are necessarily synonymous with cultural identity, and language distribution often does not correspond to the distribution of similar appearing material culture" (Gibbon 1995:181).

Through processes of ethnogenesis, "each human language, culture, or population is considered to be derived from or rooted in several different antecedent groups" (Moore 1994:925). Ethnogenesis has been a common phenomenon in the historic era in North America (Anderson 1999; Hill 1996; Roosens 1989) and provides a complex but sensible and realistic model for the formation of group identities, affiliations, and relationships in the prehistoric period as well (e.g., Blakeslee 1994; Engelbrecht 1999; Staeck 1994; Syms 1982). Processes of ethnogenesis commonly operate in frontier-boundary settings, at the edges of traditional group territories where intersocietal contact is likely to be greatest (Green and Nolan 2000; Lightfoot and Martinez 1995). A braided-stream metaphor characterizes relationships of ethnogenesis among human groups through time, illustrating the merging, splitting, and reformulation of groups, as opposed to a tree diagram which precludes a "branch" from growing out of more than one "stem." Therefore, dendritic or straight-line (cladistic) descent might be an appealing concept, but for human cultures, their languages, and their biological relationships—all of the elements of group identity—ethnogenesis is seen as a more comprehensive and realistic representation of "culture in history," to borrow the title of Diamond (1960).

Under the NAGPRA implementing regulations, "cultural affiliation is established when the preponderance of the evidence – based on geographical, kinship, biological, archeological, linguistic, folklore, oral tradition, historical evidence, or other information or expert opinion – reasonably leads" to a conclusion that "there is a relationship of shared group identity which can reasonably be traced historically or prehistorically between members of a present-day Indian tribe… and an identifiable earlier group" (43 CFR Part 10.2(e)). This language "is intended to ensure that the claimant has a reasonable connection with the materials" (U.S. House of Representatives 1990:14), a connection, we presume, of ancestry and descent. "Reasonable" gaps may exist in the prehistoric or historic records, but "a finding of cultural affiliation should be based on an overall evaluation of the totality of the circumstances and evidence pertaining to the connection between the claimant and the material being claimed and should not be precluded solely because of some gaps in the record" (U.S. House of Representatives 1990:14). Despite this guidance, however, and although several possible sources of relevant data are listed, neither NAGPRA nor the regulations nor the House or Senate Reports define "shared group identity." They define only the types of information and opinion one can use to conclude that a relationship of shared group identity probably existed, but they "offer no hierarchy nor relative weight to be assigned to these types of evidence… [which] often conflict" (McLaughlin 2000). The various forms of evidence can lead in convergent, parallel, or divergent directions; often they may appear to produce irreconcilable results, in part because they derive from and address different needs and questions. The "dialogue between different systems of meaning" represented by, for example, archaeology and folklore (Layton 1999:26) is one that ultimately bears on "the precise limits of native ideologies in the decision-making processes mandated by NAGPRA"—limits that few wish to test "because the politically unapproachable and unspeakable limits of legal pluralism and of liberal democratic governance in an area of profound cultural difference hang in the balance" (McLaughlin 2000).

Others are debating how these different ways of viewing and constructing the past might be reconciled or balanced (Echo-Hawk 2000; Mason 2000). We will not try to resolve this dilemma here. For our limited purposes of trying to trace cultural affiliation in prehistoric times, however, we may be able to tentatively operationalize the concept of prehistoric shared group identity in a manner compatible with the recognition of ethnogenesis as the principal means of identity formation. To determine cultural affiliation through a relationship of shared group identity, "one must first recognize an identifiable earlier group and then show that group's identity is traceable through time to the identity of a federally recognized tribe" (Lovis et al. 1999:12). The group continuity concept (Hall 1962; Henning 1995, 1999) affords a workable means of assessing relationships between cultural units in a way that can define cultural affiliation in prehistoric contexts using the terms prescribed in NAGPRA and its rules. A group continuity is a sequence of archaeological phases (Willey and Phillips 1958) that evinces a series of "defined traditional characteristics which are consistent within a locality or region through a period of time" (Henning 1999:14). Recognizing group continuity affords a means of tracing what may be a close archaeological equivalent of an ethnic group through time. A group continuity "is similar to an ethnic group which, while retaining identifiable elements of its ethnicity through time, may interact with other ethnic groups developing along roughly parallel lines" (Henning 1995:71). The pitfalls of trying to identify ethnicity in prehistory are plentiful and are becoming more widely appreciated (Jones 1997), so defining apparent congruities between phases or group continuities and ethnic groups is fraught with difficulties (Green 1999). "Archaeologists recognize there is no simple one-to-one correlation between ethnicity and material culture" (Emerson 1999:9; see also Gibbon 1995 and Hall 1950, above). Still, similarities among a series of artifact and feature forms, along with any additional information and sound inferences regarding, for example, biological distance, social organization, and ideology, all help to define an archaeological phase, while group continuities may link clearly related and sequential phases into an archaeological approximation of a "relationship of shared group identity."

Tracing relationships of shared group identity through the historic and prehistoric eras therefore may be possible by determining whether prehistoric and protohistoric group continuities can be defined, by seeing whether historic-period groups can be linked with these group continuities via the Direct Historical Approach, and by recognizing the ubiquity of processes of ethnogenesis—group fission, fusion, and reformulation—and their influence on group identity. Together, the group continuity and ethnogenesis models may be applied to the archaeological and historical records to supply a somewhat realistic framework within which to study cultural affiliation.

METHODS

Research consisted of: (1) a series of thorough literature reviews, (2) a series of interviews with tribal members and EFMO employees, (3) compilation of research results employing a Geographic Information System, and (4) preparation of the cultural affiliation report.

Literature reviews

The Co-Principal Investigators and research team members developed a bibliography of published and unpublished written materials relating to the cultural landscape and prehistoric and historic peoples of the study region. Sources reviewed and employed in the study include:

- catalogued and uncataloged collections and archives at EFMO
- all reports of archaeological investigations in the region that generated substantive data
- all relevant reports on Woodland, Oneota, and Historic Indian skeletal biology in the region
- relevant studies from nearby regions that employ the Direct Historical Approach or other methods in relating historic peoples with prehistoric groups

• all treaties between Indian nations and the U.S. government that affected the region
• all available reports on regional ethnohistory, including all Indian Claims Commission reports in the Garland series
• ethnographies and tribal histories for all tribes that resided in the region

In addition, studies that model or interpret the Woodland–Oneota transition and the cultural affiliations of Oneota peoples were carefully reviewed.

The study team visited and consulted the EFMO archives through the courtesy of the staff at the Monument. Other sources consulted in the study were located at the Office of the State Archaeologist, the University of Iowa Main Library and Geology Library, and the State Historical Society of Iowa Library and Archives in Iowa City. The study team obtained additional materials through the courtesy of colleagues at the State Historical Society of Wisconsin, the Minnesota Office of the State Archaeologist, the Mississippi Valley Archaeology Center at the University of Wisconsin–La Crosse, and the National Park Service, Midwest Archeological Center. Resources on the world wide web and in the Co-Principal Investigators' personal libraries also were consulted. Research also was conducted at the Newberry Library in Chicago and the American Philosophical Society Library in Philadelphia. EFMO collections were not reviewed in detail because a comprehensive collections review had just been completed (Henning 1998a, 1998c). However, all information on excavated mounds, mortuary contexts, and human remains was reviewed in detail and entered into a relational database.

Interviews with tribal historians and elders

The study team used the protocols established in the Scope of Work (Appendix A) to contact tribal historians and elders and to conduct interviews relating to traditional history and the resources of the EFMO cultural landscape. The team adhered to the Code of Ethics of the American Anthropological Association (AAA 1998) and complied with the University of Iowa's Policies and Procedures for Studies Involving Human Participants (University of Iowa 1994). See Appendices C and D for details on how the interview program proceeded.

The interviews were designed to permit incorporation of traditional historical knowledge into the cultural affiliation report. We contacted members of the Winnebago (Ho-Chunk) tribes of Wisconsin and Nebraska, the Iowa tribes of Kansas-Nebraska and Oklahoma, the Omaha Tribe, the Sac and Fox Tribe of the Mississippi in Iowa, and the Eastern Dakota. Interviews also were held with EFMO employees in order to obtain information on stories that might have been related to them by Indian people and by others with interests in the mounds.

Compilation of research results employing a Geographic Information System

Research results were compiled into both narrative and map-based formats. The maps and linked geographic information were produced through the Office of the State Archaeologist's Geographic Information System, which employs ArcView 3.2 software. The OSA GIS library contains most of these resource layers and is linked by the high-speed campus network to the Iowa Geological Survey Bureau GIS library. Maps and associated data were generated to illustrate EFMO boundaries and locations of cultural resources, regional resource distribution, and ceded lands and treaty boundaries. The GIS products were saved in both printed and electronic forms and can be integrated into NPS GIS frameworks for EFMO and other areas.

Preparation of the cultural affiliation report

The study team conducted report preparation, writing, and production in the format prescribed in the Scope of Work. Authors are indicated under each chapter's title. The co-Principal Investigators compiled and edited the report.

PERSONNEL

The Co-Principal Investigators directed and coordinated an experienced research team in this cultural affiliation study. The team consisted of:

William Green, Ph.D., Co-Principal Investigator; Director of the Office of the State Archaeologist, University of Iowa, and Adjunct Associate Professor of Anthropology and of American Indian and Native Studies, University of Iowa

Larry J. Zimmerman, Ph.D., Co-Principal Investigator; Director of the American Indian and Native Studies Program, University of Iowa, and Visiting Professor of Anthropology, University of Iowa

Joe Artz, M.A., Geographic Information Coordinator, Office of the State Archaeologist, University of Iowa; assisted by Heidi Lack, Geographic Information Assistant

Robin M. Lillie, M.A., Skeletal Biologist, Office of the State Archaeologist, University of Iowa

Dawn Makes Strong Move, B.A., is a tribal government employee of the Ho-Chunk Nation, a liaison on cultural projects, and has worked in the tribe's Legislative branches

Dawn Sly-Terpstra, M.A., Graduate Assistant and Ph.D. student in Anthropology, University of Iowa

SCHEDULE

The original schedule for the project called for completion within a 12-month period. A post-award meeting was held on March 10, 1999, with the original Contracting Officer's Representative, EFMO Superintendent, and co-Principal Investigators. The meeting led to project initiation as well as schedule modification. A formal extension of the project was communicated by the COR on October 20, 1999, with the first review draft due date of March 15, 2000. As the report could not be submitted by that date, communication between the new COR and the co-Principal Investigators in June, 2000 led to an agreement to submit the first review draft in August, 2000. Reviews and revision proceeded during the fall of 2000 and spring of 2001.

Chapter 3. Effigy Mounds National Monument Resources

LANDSCAPE AND NATURAL SETTING

by William Green

Effigy Mounds National Monument is located in Allamakee and Clayton counties, northeast Iowa, on the bluffs and terraces that form the western margin of the Upper Mississippi River valley. EFMO was established in 1949 following decades of effort by numerous individuals and groups interested in cultural and natural resource conservation. The monument encompasses 1,481 acres in three units: the North Unit, South Unit, and Sny-Magill Unit. For details on EFMO history, natural resources, land use, and management issues, see Dial (1996a), Dial-Jones (1999), Lenzendorf (2000), NPS (1991, 1999), and O'Bright (1989).

The prehistoric and historic cultures connected with EFMO resided in a regional context. As noted in Chapters 4 and 5, the territories and resources used by different groups varied greatly. Therefore, it is not possible to specifically define a region that corresponds to culturally meaningful territories for each culture. A somewhat arbitrary region is defined: the study region is considered to be the portion of the Upper Mississippi River and adjacent blufflands between the Upper Iowa River and the Turkey River (Figure 1). EFMO is centered within this ca. 50-mile (80-km) long stretch of the valley. Also situated near the center of the region is the mouth of the Wisconsin River and the city of Prairie du Chien.

Where appropriate in this study, broader areas including more of the Upper Mississippi Valley, the Driftless Area of Wisconsin, and the Paleozoic Plateau of Iowa are considered as environmental and cultural contexts. However, the term "study region" will denote the stretch of river and blufflands defined in the preceding paragraph, plus the adjoining uplands and interior valleys, within a 50 mile (80 km) radius of EFMO. The principal landscapes of the study region thus are those of the main valley proper, the high and steep bluffs, and the dissected uplands and smaller valleys.

The study region encompasses a wide variety of landforms and natural resource zones: (1) the Mississippi River main channel and sloughs; (2) islands within the Mississippi valley; (3) terraces, alluvial fans, and colluvial slopes bordering the main valley; (4) tributary valley channels and terraces; (5) steeply sloping bluff faces and ravines, including bedrock outcrops and shelters; and (6) bluff tops and adjoining upland ridges and interfluves. The richness and diversity of these resource zones was enhanced by their close proximity to each other, leading to large amounts of dynamic and highly productive ecotonal environments. Each zone and ecotone offered different opportunities depending upon the season. Long-term landscape evolution and climatic shifts also affected the availability and existence of resource types (Baker et al. 1992, 1996, 1998).

For details on the natural resources present within the EFMO boundaries and in the study region, see, e.g., NPS (1991, 1999). For information and interpretations on the ways human cultures used these resources locally and throughout the study region, see, e.g., Arzigian (1987), Benn (1979), Mallam (1976, 1984b), Stoltman (1983), and Theler (1987). Through seasonal cycles of shifting settlement locations and task-specific activity loci, these groups procured natural resources for food, medicine, clothing, shelter, implements, ornaments, and ritual use, both for local consumption and at various times for trade and exchange. As societies developed

higher levels of reliance on food production, resources such as arable and productive land gained importance (Arzigian 1987).
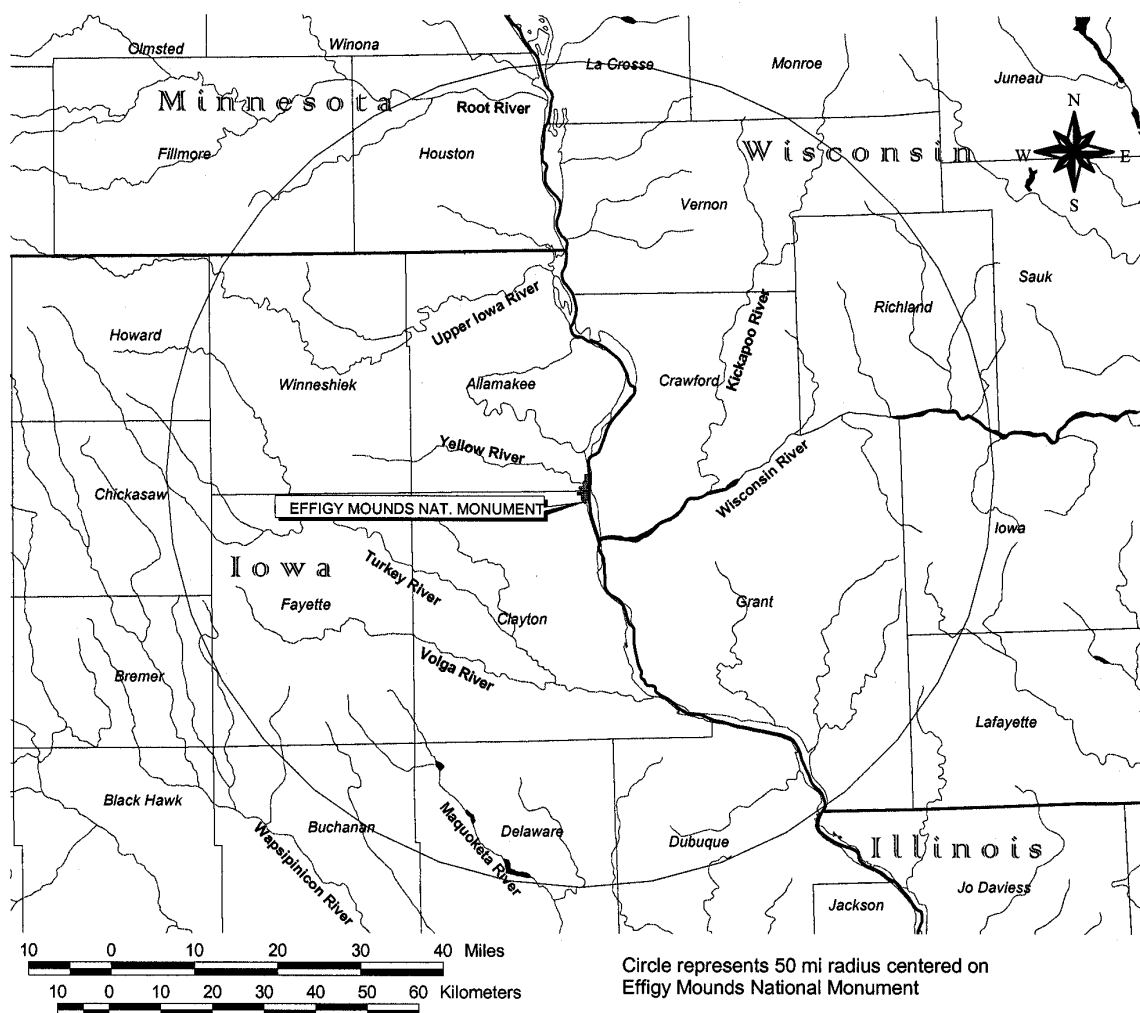
Figure 1. Location of Effigy Mounds National Monument Study Area.

SUMMARY OF EFMO EXCAVATIONS AND RECOVERED MATERIALS

by Robin M. Lillie

Numerous mounds and other non-mound sites within EFMO have been subjected to archaeological excavation, soil analysis testing, or reconstruction efforts (Dial-Jones 1999; O'Bright 1989; Lenzendorf 2000). This section supplies a brief summary of the various excavations. In the following section, we review the documented excavations at each location and the records of human skeletal remains, funerary objects, and other recovered items. The data base upon which these sections are built is presented in Appendix B. Sites are identified by their standard Iowa Site File trinomial designation ("13" stands for Iowa, "AM" for Allamakee County, and "CT" for Clayton County). Site numbers and locations are shown on Figure 2 for the
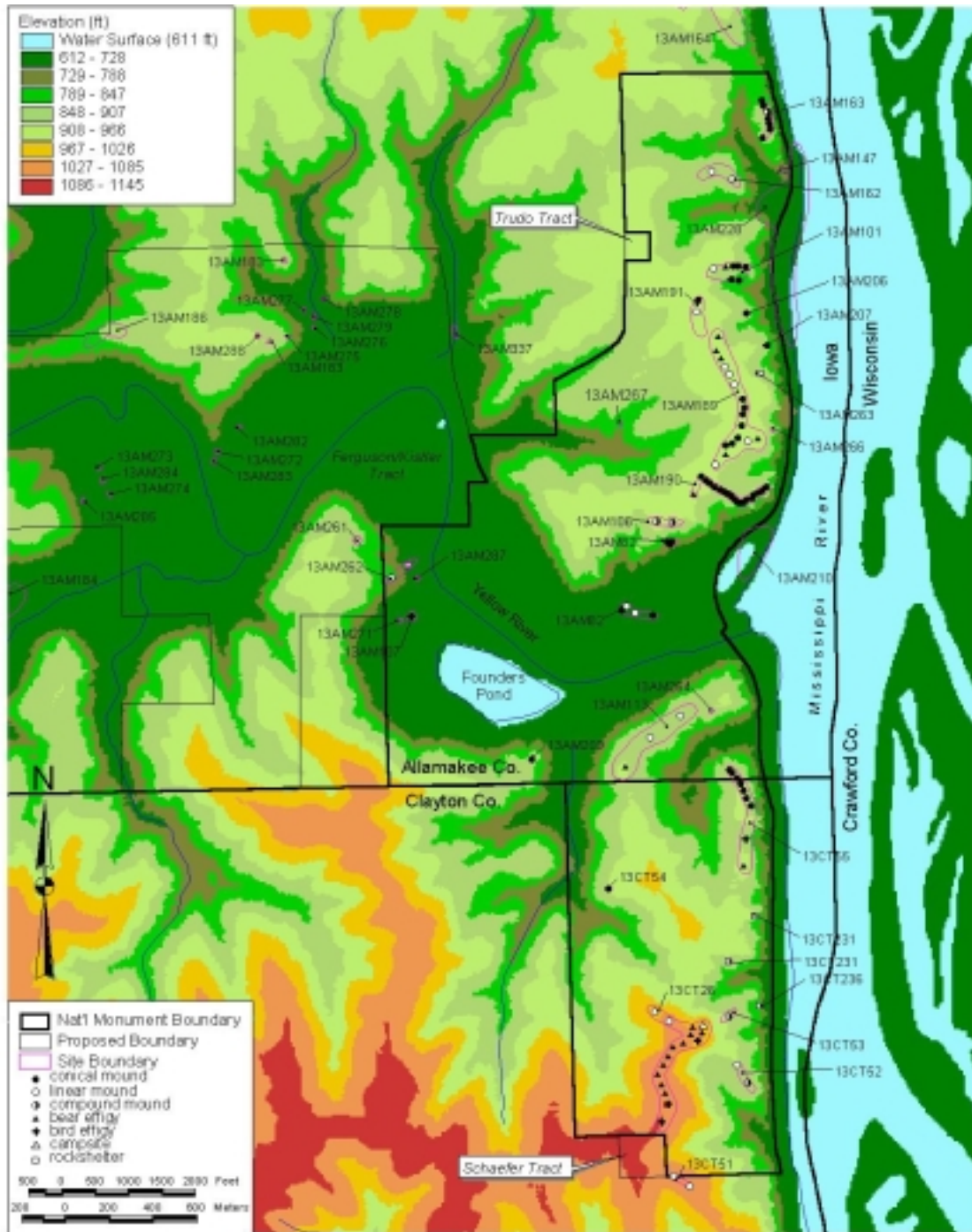
Figure 2. Recorded Archaeological Sites and Mounds at EFMO.
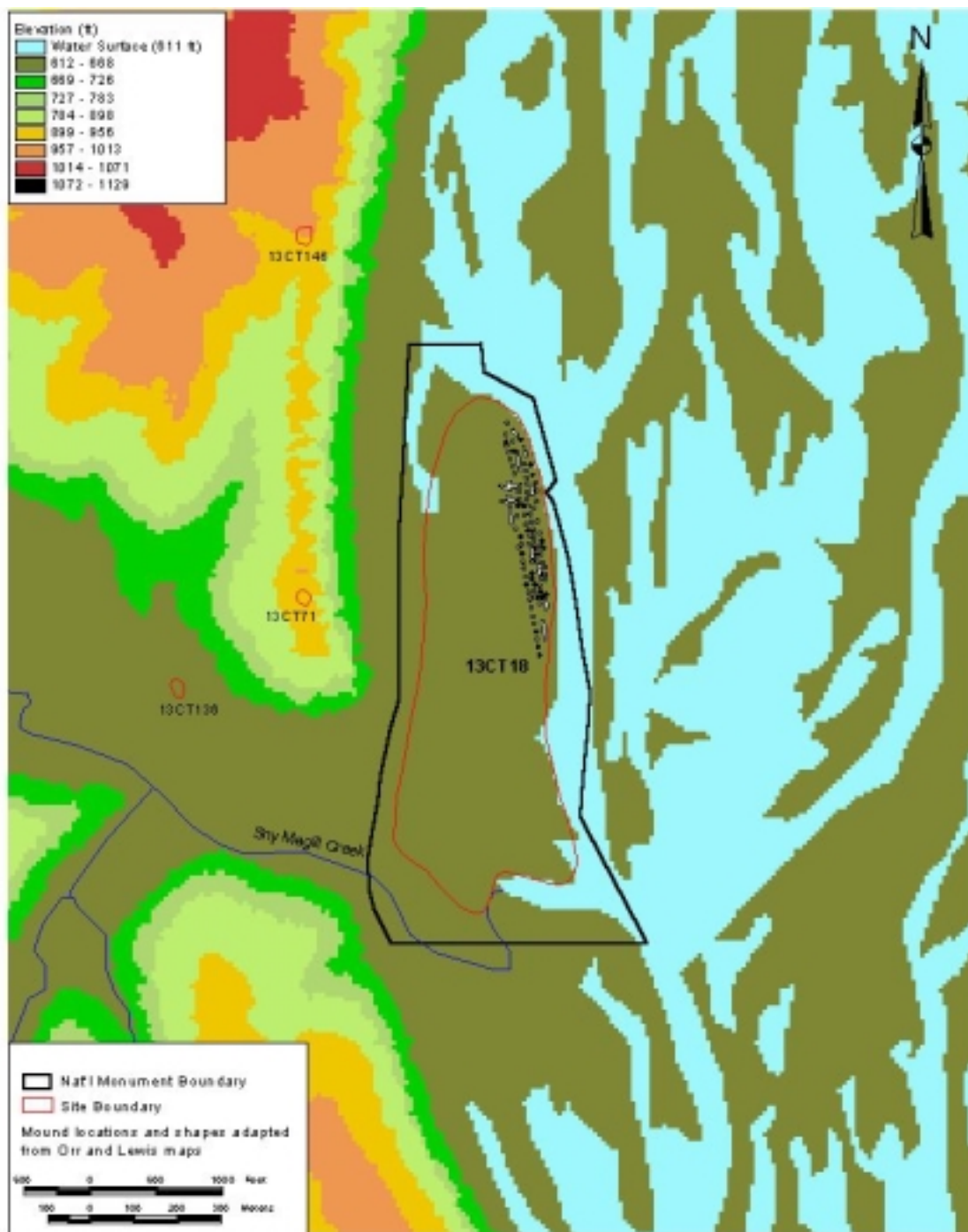
Figure 3. Recorded Archaeological Sites and Mounds at EFMO–Sny-Magill Unit.

Main Unit, South Unit, and Ferguson-Kistler Tract, and on Figure 3 for the Sny-Magill Unit. Individual mound numbers within these sites are those assigned and used by EFMO.

Archaeological excavations were conducted in the 1930s by Ellison Orr and in the early 1950s and 1960s by various EFMO or National Park Service archaeologists. One excavation at village site 13AM210 occurred in the mid-1970s. Excavations also occurred as part of the 1957–1958 Soils Analysis Project under a cooperative agreement between the National Park Service and Iowa State University. Wayne Scholtes headed the soils testing, with EFMO resident archaeologists conducting investigations when cultural material or features were encountered (Bray ca. 1958:2).

The EFMO Mounds Rehabilitation Project, conducted by John Ingmanson and other park personnel, involved some excavation in conjunction with restoration to previously damaged mounds (Ingmanson 1964; Mount 1978). Unfortunately, the records are not always clear on whether or not actual excavation was involved in restoring a particular mound.

In 1999, magnetic and resistivity data were collected on five mounds at EFMO (Kvamme 1999). The geophysical survey procedures did not involve excavation, but the results are reviewed here as they are suggestive of mound construction techniques or may hint at undocumented excavations. At 13AM189, the magnetic data from Mound 31 (bear effigy) revealed "a narrow and concentrated magnetic core, much thinner than the mound itself, suggesting an important construction detail for this effigy, or that erosion had greatly widened it with less magnetic materials from its original shape" (Kvamme 1999:8). Magnetic and resistance data collected on Mound 52 (13AM190 bear effigy) and Mound 82 (13CT26 bird effigy) suggest the head and foreleg of the bear and tail and the rest of the bird may have been separate constructions "because of their lack of continuity with the remainder of the mounds" (Kvamme 1999:8).

Documented excavations have been conducted at 35 mounds from 10 sites. Ten are effigy mounds (nine bear and one bird), two are linear mounds, and 23 are conicals. These numbers are probably on the conservative side, as not all mound restoration and excavation activities are well documented. Of the 35 excavated mounds, 17 mounds at eight sites contained human skeletal remains representing 53 individuals (summarized in Chapter 7, this report). These remains came from one bird effigy (13CT18), one bear effigy (13CT26), one linear mound (13CT18), and 14 conical mounds (13AM82, 13AM101, 13AM189, 13AM190, 13AM206, 13AM207, and 13CT18). Over half of the individuals (32) were from Middle Woodland burial contexts: 13AM82 (Mounds 55 and 57); 13AM101 (Mound 12); 13AM190 (Mound 33); and 13CT18 (Mounds 24 and 43). Excavations also were conducted at one rockshelter (13CT231), at the bluff base near 13AM147, and a village site (13AM210).

Data gathered on EFMO excavations, burials, and human skeletal remains was organized and entered into a relational database, "effigy," in Microsoft© Access 97 (Appendix B). This database is compatible with the Iowa site records database file maintained at the Office of the State Archaeologist. An electronic copy of the database accompanies this report. The original file also will be stored at the OSA. The database was created with the intention that it could be updated and modified as information about EFMO archaeological sites comes to light. Additionally, the database can be used as a research tool, as it contains information otherwise available only through multiple sources, some difficult to obtain.

Table 1 lists the five data tables created within the database, along with field names and a brief description of the field data. The Site Number table contains general information about each site, such as official site number, known site names, and relevant historical or informational data. The Site Description table includes a separate listing for each mound or component of a site. Documented excavations, site intrusions such as vandalism, known burials, cultural affiliation,

etc. are included in this table. The Burials table includes information regarding specific burial features. Data in the Human Remains table refers to specific individuals represented by remains within a burial feature, and includes age, sex, and pathological conditions. The Reference table includes bibliographic citations relevant to each site. The five tables are linked so that queries can be run across the tables.

Table 1. "Effigy" Database Tables and Field Descriptions.

Table Name	Field Name	Field Description
Site Number	Site Number	as assigned by the OSA Site Records
	Site Type	i.e., mound, rockshelter, etc.
	Site Name(s)	as published in literature or on OSA Site Records
Site Description	EFMO Number	number used to identify a specific mound or single-unit site as assigned by EFMO
	Mound Type	i.e., linear, conical, effigy, etc.
	Mound Subtype	i.e., bear effigy, bird effigy, conjoined conicals, etc.
	Other Mound Numbers	any numbering or other designation given to a specific mound other than by EFMO, such as Ellison Orr or T. H. Lewis
	Dimensions	documented measurements for a site or mound
	Condition of Site	from published documents
	Excavations	name, date, and type of archaeological excavations conducted
	Other Site Intrusions	includes vandalism, potting, road or railroad construction, etc.
	Cultural Affiliation	based on documentation or artifacts
	Number of Burials (field)	the # of distinct burial features identified during excavation
	MNI (field)	the # of distinct individuals identified during excavation
	Radiocarbon Dates	published radiocarbon dates
	Comments	additional excavation descriptions or other relevant data
	Cultural Material	cultural material found at a site including collection location
Burials	OSA Burial Project Number	remains from a specific burial feature analyzed and/or reported on by the Office of the State Archaeologist Burials Program
	Burial Number (field)	assigned to a particular burial feature in the field
	Assigned Burial Number	an arbitrary number assigned for database purposes
	Additional Provenience	information concerning the location of the burial
	Burial Type	i.e., bundle, extended, cremation, etc.
	Burial Description	may include information about the relative positioning of remains within the burial feature and elements found
	MNI in Burial (field)	the number of individuals identified during excavation
	Cultural Affiliation	published or determined from associated artifacts
Human Remains	Individual Number (field)	a number or designation given during excavation
	Assigned Individual Number	an arbitrary number assigned for database purposes
	Additional Provenience	may include such data as the position of a particular element
	Burial Context	from documentation
	Elements Present	a brief description of skeletal elements representing individual
	MNI	the minimum number of individuals represented by elements
	Cultural Affiliation	published or determined from associated artifacts
	Age	based on osteological examination or published information
	Sex	based on osteological examination or published information
	Pathologies	pathological conditions identified during osteological exam
Reference	Site Number	
	Author	
	Date	
	Title	
	Publication Information	

EFMO ARCHAEOLOGICAL EXCAVATIONS AND RECOVERED MATERIALS:
DESCRIPTIONS

by Robin M. Lillie

The following descriptions cover documented excavations as well as records of burials or human skeletal remains from EFMO sites. Additional mounds may have been partially excavated in conjunction with the Mounds Rehabilitation Project, but documentary evidence is lacking. Table 2 lists and describes the radiocarbon ages determined from samples obtained from EFMO mound excavations. Henning (1998a, 1998c) describes and illustrates many of the diagnostic artifacts referred to in this section and in Appendix B.

13AM82

Site 13AM82, Nazekaw Terrace, was originally surveyed by T. H. Lewis (1892). He platted two effigies and three conical mounds. Orr (1939:107) states that, additionally, Lewis noted 12 embankments, 6 club-shaped embankments, 39 conical mounds, and one ruined tailless effigy. In 1926, the site consisted of only seven conical and two bear effigy mounds, EFMO nos. 55–61 (Orr 1939:107), as most of the mounds had been destroyed by cultivation. A survey conducted in the 1970s presents a slightly different accounting of the mound numbers and types. "In 1892 T.H. Lewis visited this group and recorded 2 bear effigies, '1 ruined tailless animal, 12 embankments, 1 club shaped embankment and 37 round mounds' (Notebook 32, p. 17).... At the present time 3 conical mounds and two linear mounds survive. Our studies show the existence of two linear mounds. The circumstances of the omission of these mounds from Orr's 1926 survey are unknown" (Benn and Thompson 1976:2). Excavations were conducted in mounds 55, 56, and 57 in 1950 by Paul Beaubien, and in Mound 61 in 1962 by EFMO archaeologist Gordon Garland.

In its review of the draft of the present report, the Midwest Archeological Center provided the following information that may help clarify the types and numbers of mounds at this site:

> Three of the depicted mounds [in Orr 1939:107] are EFMO numbers 55, 57, and 61. Mounds 55 and 57 are the northern-most conical mounds and 61 the southern-most conical mound. The single mound in the path of Highway 13 was destroyed in 1935 (Orr volume 4:114a [Orr 1935b]) and was never assigned a number. The five mounds listed as having been platted by Lewis were no londer in existence by the time of Orr's survey in 1926. Orr's text (1939:107) states "Except for round and long embankments in the brush south of Highway no 13, and 2 round at the foot of the bluff on the north-east corner of the terrace, none of the others can now be located with anything like certainty". To our knowledge, there is no mention of effigies in Orr's reports. [Midwest Archeological Center 2000].

Mound 55 – conical

The south side of Mound 55 was disturbed by an old logging road prior to 1949 (Mount 1978). Paul Beaubien's (1952b, 1953c) 1950 excavation was placed in the mound center, where cremated and scattered human skeletal material representing at least three individuals was found. Skeletal elements specifically mentioned by Beaubien (1953c:129) include a charred mandible and cranial fragments, fragments of a second cranium, an unburned femur with a charred and crushed innominate, numerous charred human bone fragments in an area of black earth containing charcoal, a charred mandible portion, and tooth enamel fragments. A radiocarbon date of AD 1050±300 years was derived from charcoal recovered at the same level as the human bone. Mount (1978:23) believed the sample was probably contaminated, as the ^{14}C date and cultural

Table 2. Radiocarbon Dates for Mounds in Effigy Mounds National Monument.*

Site Name and Number	Mound/ Type	Age RCYBP (BC/AD uncal.)	Laboratory Sample Number	Cultural Affiliation	References
Nazekaw Terrace Mound Group 13AM82	55[a] conical	900±300 (AD 1050)	M-40**	Middle Woodland McGregor phase	Crane (1956); Logan (1976)
Red House Landing Mound Group 13AM101	12[b] conical	1740±110 (AD 210)	I-295	Middle Woodland	Buckley et al. (1968); Parsons (1962); Ruhe (1969)
	12[c] conical	1960±90 (10 BC)	I-296	Middle Woodland	Buckley et al. (1968); Parsons (1962); Ruhe (1969)
Wild Cat Mound Group 13AM189	30[d] bear or buffalo effigy	930±300 (AD 1020)	M-41	Effigy Mound Keyes phase	Crane (1956); Logan (1976)
Fire Point (Procession) Mound Group 13AM190	33[e] conical`	1750±300 (AD 200)	M-310	Middle Woodland McGregor phase	Crane (1956); Logan (1971, 1976)
Sny-Magill Mound Group 13CT18	43[f] conical	2430±250 (480 BC)	M-305	Early Woodland Ryan focus	Crane & Griffin (1958); Logan (1976)
	43[g] conical	2500±250 (550 BC)	M-308	Early Woodland Ryan focus	Crane & Griffin (1958); Logan (1976)
	24[h] conical	430±200 (AD 1520)	M-306**	unknown	Crane & Griffin (1958); Logan (1976)
	27[i] bird effigy	<200 (modern)	M-307**	unknown	Crane & Griffin (1958); Logan (1976)
Jennings-Liebhart (Marching Bear) Mound Group 13CT26	77[j] bear effigy	1575±100 (AD 375)	I-441**	Effigy Mound Keyes phase	Trautman (1963)
	77[k] bear effigy	1325±100 (AD 625)	I-412	Effigy Mound Keyes phase	Trautman (1963)
	69[l] linear	430±75 (AD 1520)	I-413**	unknown	Trautman (1963)

* Modified from Tiffany (1981:61)
** Denotes problematic or unacceptable dates
Note: all samples apparently are wood charcoal. See following page for notes on individual samples.

Table 2. (continued)

Notes on individual assays:

a. Excavated by Beaubien (1953c). Middle Woodland context but Late Woodland age, most likely due to problems with the dating method. "The site contained evidence of cremations as well as Hopewell blades and a bear-canine ornament" (Crane 1956:666). This age was obtained using the obsolete solid-carbon or "carbon-black" method, which was "open to the possibility of contamination by airborne radioactive debris. When such contamination occurs, it increases the count given by the sample, and thus makes the sample appear to be younger than it actually is" (Crane 1956:664).

b, c. Middle Woodland context and age; excavated by team of Parsons (1962) and Ingmanson (1964). "Hickory charcoal from cremation zone, 38 to 40 in. depth in conical mound… Soil profile above zone is weakly developed, cremation zone in buried B horizon 32+ in." (Buckley et al. 1968:281; see also Ruhe 1969:202).

d. Late Woodland age, but obtained by solid-carbon dating method (see note a, above); "no evidence of a burial in this bear or buffalo mound, but some charcoal and a layer of nondescript rocks are present" (Crane 1956:666). Rock feature described as an "altar" (Beaubien 1953b; Ingmanson 1964; Mount 1978:16).

e. Date originally reported (apparently incorrectly) as derived from Mound 33 of the Sny-Magill group but is from Fire Point (Procession) group; "representative of the late Hopewell period" (Crane 1956:667). Excavated by Beaubien (1952b, 1953b) and Logan (1971).

f. Early Woodland age and context: "Charcoal from east portion of Mound No. 43… collected from a partly consumed pole not in association with the principal inclusions, but it must have been in place when the mound was formed. Sherds of a later-day pottery type, related to *Madison Cord-Impressed*, found in the mound fill closer to the surface than the charcoal and away from the central portion of the mound, apparently were introduced after the original period of mound construction" (Crane and Griffin 1958:1099). Excavated by Beaubien (1953a, 1953b).

g. Early Woodland age and context: "Charcoal from the west portion of Mound 43 which produced sample M-305" (Crane and Griffin 1958:1099) (see note f, above).

h. "The small sample for analysis was recovered by collecting very small pieces just below the surface of the mound. The charcoal was not associated with the mound's principal inclusions. This recent age is not acceptable to determine the age of the mound's primary construction" (Crane and Griffin 1958:1099). Excavated by Beaubien (1953b).

i. Charcoal "found as scattered finds in mound fill from 6 to 18 in. below the surface; could be recent" (Crane and Griffin 1958:1099). Excavated by Beaubien (1953b).

j. "Charcoal from an area of scattered charcoal and burnt earth in heart region of bear-shaped burial mound, 1 ft. 6 in. to 2 ft. 10 in. below surface" (Trautman 1963:72). Excavated by Ingmanson (1964).

k. Context same as I-441 (note j, above), but "1 to 2 ft. deep" (Trautman 1963:72). Difference of 250 years between samples from same mound complicates interpretation.

l. "Charcoal from 1.5 ft. beneath bottom of treasure hunter's hole at one end of a linear considered to be part of the Marching Bear Group" (Trautman 1963:72). Excavated by Ingmanson (1964).

material are contradictory. The fill consisted of large rocks and many lumps of burned earth. The human bone was burned and found scattered in the lower layers of the fill, along with charcoal fragments, three stone blades, and a perforated bear canine. Two of the stone tools were described as similar to Snyder's notched projectile points. The artifacts suggest a Middle Woodland (Hopewell) cultural affiliation.

During the Mounds Rehabilitation Project, Ingmanson (1964:29, 34) noted that the mound had been disturbed by rodent activity. Fill was added to help restore the mound's original contours, and the surface was seeded with grass.

An osteological analysis of the human skeletal material from Beaubien's excavation identified a minimum of three individuals represented by the highly fragmented burned and unburned remains (Fisher and Schermer 1987:4–8). There is some question as to whether all the remains were recovered from Mound 55. Some of the material was marked "AM47" but was included with the same accession as the Mound 55 material. However, the condition of the "AM47" labeled material was not consistent with human bone from current site 13AM47 accessioned at EFMO, while it was consistent with some of the Mound 55 remains. One of the identified individuals was a subadult represented by an unfused vertebral centrum. Duplication of the right temporal bone, a portion of the right clavicle, and patellae indicated a minimum of two adult individuals. One adult was possibly female, the other possibly male. No pathological conditions were noted on any of the remains, including the one tooth recovered.

Additional human remains from Mound 55 were found in the EFMO collections and sent to the Iowa Office of the State Archaeologist Burials Program in 1998 (Henning 1998c). These remains were examined by Shirley Schermer, Burials Program director (OSA 1998). All the bones consisted of fragments, many covered with preservative and paper-like wrapping. All except one tubular fragment could be identified as human or possibly human. They do not appear to represent any additional individuals to those identified in the previous osteological examination.

Mound 56 – conical

Paul Beaubien (1952b, 1953c) partially excavated this mound in 1950. However, he ceased excavation when he found that the mound had been vandalized. One historic artifact, probably from the vandals, was recovered. Ingmanson (1964:33) reported that the mound had been partially destroyed by an old (pre-1900) logging road prior to Beaubien's excavation. Fill had been added to the mound to help restore its original contours, and the fill surface was seeded with grass (Ingmanson 1964:34).

Mound 57 – conical

Paul Beaubien (1953c:133–135) excavated in Mound 57 in 1952. A burial pit measuring 8.8 ft. by 3.8 ft. was found at 2.7 ft. below the mound surface. The pit was aligned east-northeast by west-southwest. The burials had been disturbed by rodent activity. A bundle burial, described as probably intrusive, was found at 3.8 ft. below the mound surface. The remains consisted of three poorly preserved long bones. Two additional bundle burials were found in a subfloor pit. The western bundle consisted of the remains of an adult male and a subadult. Cranial fragments representing two adults were included in the eastern bundle burial. One of the bundles, unspecified, contained portions of a femur, tibia, and patella in correct anatomical position. A copper ornament (breast plate) was found in association with subadult ribs near the center of the burial pit. During the Mounds Rehabilitation Project, fill was added to the mound to help restore its original contours, and the fill surface was then seeded with grass (Ingmanson 1964:34).

The skeletal remains were examined by Dr. Alton K. Fisher soon after Beaubien's excavation. A minimum of 12 individuals was represented: one infant, one 3-year-old, a 6-year-old, one 12-year-old, and eight adults. No osteological report was published.

Mound 61 – conical

Mound 61 was excavated in 1962 by Garland Gordon (1968:118–125; Ingmanson 1964:34–39). The mound formerly had been inside a farmer's pig pen, and part of the mound had been rooted into by the animals. The excavation was conducted in conjunction with the Mounds Rehabilitation Project. The excavation trench was approximately 3 ft. by 4 to 5 ft. (Mount 1978:24). Although no features or evidence of burning were found, several projectile points and pot sherds were recovered from the mound fill. Three points were identified as Raddatz, and one as a Durst stemmed (Ingmanson 1964:36), suggesting an Archaic component. The pottery was local Woodland Weaver Cordmarked, Levsen Punctate, and Madison Cord Impressed. Gordon restored the mound to its original shape following his excavation. A Woodland rim sherd and five projectile points are in the EFMO collections (Henning 1998a:9).

13AM101

Site 13AM101, the Red House Landing Mound Group, consists of seven mounds (EFMO nos. 10–16). The mounds were surveyed in 1910 by Harry Orr (Orr 1939:82–84) as part of the larger Red House-Yellow River Mound Group. Harry Orr constructed a plat map in 1911 or 1912, depicting five conicals, a bear effigy, and one linear mound. Ellison Orr visited the Red House-Yellow River Mounds in 1931, noting that many of the mounds in the area of 13AM101 had been destroyed by land clearing and cultivation and that most of the conicals had been either excavated or vandalized by pot hunters. However, all the mounds included within site 13AM101 were still present in 1931.

Soils analysis testing was performed on several mounds in 1958–1959 by W. H. Scholtes, Roger Parsons, and others (Parsons 1962). John Ingmanson, the resident archaeologist, investigated any cultural material or burials. Mounds then outside the public view, which had not been excavated previously, were selected for testing. A 3-ft.-wide trench was dug through the mound center, with 0.25 inches removed at a time (Parsons 1962:14).

Mound 12 – conical

Mound 12 was extensively excavated by Ingmanson (1964) in the summer of 1959 in conjunction with soil testing (Parsons 1962; Mount 1978:11). The mound diameter was reported as 51 ft. and contained fill to a maximum of 2.8 ft. The original ground surface had been removed prior to mound construction. During Ingmanson's excavation, he uncovered a burned burial beneath a layer of "brick-red soil" flecked with charcoal that reached beyond the burial feature, and covered an area of 2 to 3 ft. in diameter (Ingmanson 1962:17; Mount 1978:11). The burial feature was just to the north and west of the mound center and overlain with "three stones" (Parsons 1962:Fig. 4). The randomly interred bones were described as a bundle burial. Burning of the burial probably occurred in situ as the surrounding soil was heavily burned and the iron content oxidized (Parsons 1962:24). No artifacts were recovered during the excavation. The human remains were accessioned in 1977 by John Ingmanson under Access. 78 (Henning 1998a).

An osteological analysis of the human skeletal remains recovered from the burial feature (Fisher and Schermer 1987:72–75) reported that a minimum of two adults and two subadults were represented. One subadult, 1.5 to 2.5 years old, was represented by dental remains, a clavicle fragment, and femur shaft fragments. The second subadult, 5 to 6 years of age, was represented by dental remains, a clavicle fragment, and femur and tibia fragments. One enamel hypoplastic

defect was noted on the remains of the older subadult. The adults were represented by incomplete, highly fragmented, cranial and postcranial elements. One was male, the other possibly male. An adult tibia shaft displayed evidence of periostitis.

Mound 13 – bear effigy

This mound was subjected to trenching during soils analysis work conducted in 1958–1959. A trench 3 ft. wide was excavated across the abdomen just anterior to the back leg. No features or artifacts were found. In 1971, a shallow depression in the shoulder area was refilled with soil. The depression measured 9 ft. long by 6 ft. wide and was less than 1 ft. deep (Husted 1971:24).

Mound 14 – linear

No archaeological data have been reported from the 1958–1959 soils analysis trenching conducted on Mound 14 (Mount 1978:12).

Mound 15 – conical

Mount (1978:12) reported that Mound 15 had been damaged by pot hunters prior to 1949. Husted (1971:25) refilled a shallow circular depression, measuring approximately 7 ft. in diameter and about 1.5 ft. deep, near the mound center. In an attempt to find the back dirt from the vandal's excavation, Husted made small, shallow trenches in the mound exposing burned earth. Fill was brought in from the nearby forest floor. Husted (1971) described this mound as containing burned earth, similar to Mound 12.

Mound 16 – conical

Mound 16 had been damaged by pot hunters prior to 1949 (Mount 1978:13). A vandal's pit was refilled by Husted (1971:25–26). The pit measured 9 by 7 ft. and was 2 to 3 ft. deep. Small, shallow trenches were dug in the mound in an attempt to find the back dirt from the vandals' pit, exposing burned earth. Perforated plastic was used to line the vandal's pit, and the pit was refilled with soil from the nearby forest floor.

13AM113

Site 13AM113 is composed of 2 linear mounds and a bear effigy mound, EFMO nos. 62–64. The bear effigy was excavated by James Anderson in 1960.

Mound 64 – bear effigy

In 1960, Anderson (1961:9) excavated a test trench through the central portion of this bear effigy in an attempt to determine the original mound margins. The mound had been severely damaged by cultivation prior to Anderson's excavation. No cultural material was encountered. The excavation trench was backfilled and the area seeded with grass.

NEAR 13AM147

Ingmanson (1964:50) reported that in the spring of 1950 Paul Beaubien excavated a trash deposit at the foot of the cliff containing Hanging Rock Rockshelter, 13AM147 (EFMO no. 100). A flexed burial and 120 Woodland pot sherds were removed from the excavation. The sherds were not directly associated with the burial. No other information about this burial or Beaubien's excavation was found. The current location of the skeletal material and artifacts is unknown. Because of the unknown cultural context of this burial, it was not included in the summary of Effigy Mound culture burials (Chapter 7, this report).

13AM163

The Hanging Rock Mound Group consists of one compound and six conical mounds, EFMO nos. 1–7. Mound 2, a conical mound, was subjected to excavation in 1958 as part of the Soils Analysis Project.

Mound 2

In 1958, Robert Bray excavated a 3-ft.-wide trench through Mound 2 across the greatest diameter of the mound and through the apex (Bray ca. 1958; Parsons 1962:14; Ingmanson 1964:13–14). The mound measured 45 ft. in diameter and was 3 ft. high. A rock platform or "crypt" was encountered, but no burials were uncovered. No depth or provenience information for the rock feature is documented. Two areas on the platform displayed evidence of burning (Ingmanson 1964:14). A charcoal sample was collected from an area of burned earth near the north end of the trench. "Scattered small stones and burned clay fragments were encountered throughout the mound fill but vertical profiles above the rock platform showed nothing of note" (Bray ca. 1958:8). A plan and cross section of the Mound 2 excavation is illustrated in Parsons (1962:59), but the stone platform is not included.

13AM189

The Wildcat Mound Group, 13AM189, contained 17 mounds (EFMO nos. 19–32, 92–94), five effigies, five linears and seven conicals, when mapped by Harry Orr in 1902 (Orr 1939:84). A wildcat or lynx effigy, two additional effigies, and two linears were obliterated by cultivation by 1931 (Orr 1939:83). The destroyed mounds were at the north end of the mound group (Petersen 1986a:39). Documented archaeological excavations were conducted in mounds 19 and 30 in 1950 by Paul Beaubien (1952a, 1952b, 1953b). Other documentation indicates some minor excavation was conducted in the course of reconstructing mounds that had been vandalized (Husted 1971).

Mound 19 – linear

Mound 19 was almost completely obliterated by cultivation by 1949 (Mount 1978:15). In 1950, Paul Beaubien (1952a, 1952b:3) excavated a 77-ft.-long trench into the 102-ft.-long mound. Charcoal was recovered at or near the mound floor (Ingmanson 1964:18–20), but no burial features or artifacts were found. Petersen (1986a:40) reported that cultural material from this mound was in the EFMO collections.

Mound 28 – conical

This mound had been damaged by pot hunters prior to 1949 (Mount 1978:15). During mound renovation activities (Husted 1971:16), this mound measured 30 ft. in diameter and 3 ft. in height. A vandals' pit in the mound center measured 5 ft. in diameter and was 1.5 ft. deep. To clear the disturbed area and restore the mound, Husted (1971:16–17) excavated an 8 ft. by 6.5 ft. rectangle to a maximum depth of 3.5 ft. over the disturbed area, reaching the submound floor. The fill was described as consistent throughout, including the submound area, except in the vandalized portion, which contained large pieces of charcoal and burned rock probably from a fire built by the vandals. One human vertebra, a human metatarsal fragment, and a small stone celt were recovered. Husted (1971:17) noted that cutmarks on the metatarsal appeared to be of recent origin, possibly put there by one of the vandals. Following the excavation, the pit was lined with perforated plastic, backfilled, and seeded with grass. A stone celt from this mound is in the collections at EFMO (Petersen 1986a:40).

Mound 30 – bear effigy

Beaubien (1952a, 1952b:3–4) partially excavated this 20-meter-long bear effigy mound in 1950. No burials were found. An area of scattered rocks, interpreted by Beaubien (1953b:64) as an altar, was found in the flank region of the effigy. Charcoal fragments from approximately 2 inches above and 4 to 5 inches anterior to the "altar" area were submitted for radiocarbon dating (Ingmanson 1964:20–22). Slumping from Beaubien's excavation trenches left shallow depressions in the mound. In 1971, leaves and sod were removed from the affected areas, fresh soil was used to fill the depressions, and the areas were seeded with grass (Husted 1971:27).

13AM190

Fire Point or Procession Mound Group, EFMO nos. 33–52, consists of 19 conical mounds and one bear effigy mound. Mound 33 was excavated by Ellison Orr in 1931 and again by Wilfred Logan in 1952. Several other mounds were subjected to some minor excavation by Garland Gordon in 1965, although no report was ever written (Mount 1978:20–22; Henning 1998a:9).

Mound 33 – conical

Mound 33 is a large conical measuring 45 ft. in diameter and 5 ft. in height. In September 1931, Ellison and Fred Orr excavated into this mound (Orr 1939:85–89; see Lenzendorf 2000:64–65). A large pit had previously been dug into the west half of the mound, presumably by pot hunters, and pieces of burned earth were exposed in the depression. Orr excavated an 8-ft.-square unit over the old vandal's pit. Fragments of human bone were found in the vandal's pit, including a femur, an incomplete humerus, half of a mandible, six cranial fragments, and rib and vertebral fragments. The excavation was taken to 7 ft. below the top of the mound to what Orr believed to be the mound floor. At this level, a burial was found in the southwest corner of the unit, 4 ft. south and 7 ft. west of the mound center and about 2 ft. below the natural ground surface. The upper arm bones and skull were missing, probably as a result of the vandals' activities. The burial was extended, with the head to the east. The arms were flexed with the forearms across the body. Seven bird bone awls were found under the right humerus. While many of the bones were fairly well preserved, the hand and foot bones were badly disintegrated. North and to the right of the extended burial was an undisturbed bundle burial of an adult male. However, the presence of a third humerus indicated at least two individuals were represented in this burial. Elements present were the cranium, mandible, both femora, three humeri, and fragments of other large bones. No artifacts were found with this burial. The burial feature containing the extended and bundle burials was completely covered with limestone (Mount 1978:17), described by Logan (1976:147) as a rock enclosure.

In 1952, monument archaeologist Wilfred Logan carried out extensive excavations in Mound 33 (Logan 1971; Mount 1978:17–17). He completely excavated the central portion of the mound by digging trenches extending in four directions from the mound center. However, only the south trench extended to the edge of the mound. Bits of burned bone from the vandal's pit were found in the upper level of Logan's excavation and represent at least two individuals, one subadult and one adult (Logan 1971:34; Mount 1978:16). Two undisturbed but fragmented burials were encountered on either side of the central area in a layer of yellow clay above limestone rocks. They were 4 ft. 5 in. below the mound apex, at a higher level than the burials found by Orr (Logan 1971:38). The remains were so fragmentary that the burial type could not be determined. Seven scattered bones in two clusters were uncovered in the east-central portion of the mound. The northern cluster consisted of one vertebra, a rib fragment, and a long bone shaft portion. The southern group included a femur head, long bone shaft portion, and a fragment from a tibia or

fibula. A chipped stone tool of unidentified type was near the south group. Just below and south of the northern group of long bone fragments was a large copper breast plate. The second burial encountered by Logan was in the western trench extension at 3 ft. 8 in. below the mound apex. It was within the yellow clay layer but no rocks were under the remains. The remains consisted of six phalanges and a long bone shaft portion. Clamshell was found near this burial, and a scraper was recovered above the remains. Three tubular copper beads were recovered 18 inches north and east, and 2 inches below, the second burial.

The burials recovered by Orr from Mound 33 can be summarized as follows: fragments found in the vandal's pit; an adult female with the skull missing and partially disturbed by vandals; and an adult male and an unidentified individual from an undisturbed bundle burial. The burials found by Logan include bone from the back dirt around the vandal's pit and/or Orr's previous excavation representing a subadult and an adult (possibly the same as the adult found in the pit area by Orr); two fragmented burials around the perimeter of the mound center representing two to three individuals.

A radiocarbon date obtained from a charred log recovered from Mound 33 in 1952 is AD 200±300 (Tiffany 1981:61). Four artifacts recovered by Logan are in the EFMO collections under Access. 4 (Henning 1998a). Cultural affiliation of the mound is Middle Woodland.

An osteological analysis of the human remains recovered from Mound 33 (Fisher and Schermer 1987:79–85) revealed a minimum of five individuals. Three were subadults, a 1 to 2 year old, a 13 to 15 year old possible male, and a young subadult of indeterminate age. The two adults were a male and female of indeterminate age. The juvenile had dental remains characterized by numerous enamel hypoplastic defects. One of the adults suffered from a condition of unknown etiology causing severe periostitis. Adult vertebrae displayed evidence of osteoarthritis. The minimum number of individuals recovered by Orr was five. A possible additional two to three individuals were recovered by Logan. The osteological analysis suggests a minimum of five individuals, but it is possible that two adult males and two adult females are represented, as suggested by the excavation documentation, increasing the minimum number of individuals to seven: three subadults and four adults (Schermer 1989).

Mound 36 or 37 – conical

Human skeletal material collected in 1928 by a local avocational archaeologist, H. P. Field, and donated to EFMO was included in Access. 16, along with five artifacts (Henning 1998a). An osteological analysis of the remains (Fisher and Schermer 1987:30–31; Schermer 1989) found that these highly fragmented and incomplete remains represent a minimum of two individuals. One was a subadult 4.5 to 5.5 years old; the other an adult, possibly male, of indeterminate age.

Mound 38 – conical

In 1965, Garland Gordon (1968:123) discovered a vandal's pit in Mound 38. In excavating the vandalized area, Gordon exposed a burial at the side and near the bottom of the disturbed area. The burial was left exposed over night and was found to have been severely damaged the following day. "The skull and other bones had been broken up and scattered and some had been removed" (Gordon 1968:123). The exact number of burials uncovered by Gordon is unknown, but a member of the 1965 excavation crew reported that at least four were found (Mount 1978:19). A Woodland pot sherd is in the EFMO collections under Access. 109 (Henning 1998a:11).

An osteological analysis of the remains from Mound 38 determined that a minimum of five individuals were represented (Fisher and Schermer 1987:87–90; Schermer 1989). One juvenile, approximately 15 years of age, was represented by a cranial fragment, mandible fragment,

innominate fragment, incomplete right humerus, a vertebra, and one loose tooth. Numerous cranial fragments, postcranial fragments, limited dental remains, and a few complete smaller elements represent four adults of indeterminate age. One was male, two female, and the third of indeterminate sex. The only pathological condition noted was a single carious lesion.

Mound 39 – conical

Mound 39 had been damaged by pot hunters prior to 1949 and was the subject of limited excavations by Garland Gordon in 1965 (Mount 1978:20). Although a crew member reported that no features were found, chert flakes and disintegrated bone were in the EFMO collections (Petersen 1986a:41). Human skeletal material consisted of 23 small fragments representing one individual of indeterminate age and sex (Fisher and Schermer 1987:86; Schermer 1989).

Mound 41 – conical

This mound was probably subjected to mound restoration activities by Garland Gordon in 1965. Cultural material from this mound is in the EFMO collections (Petersen 1986a:41). This material consists of a single flake (Henning 1998a:11) and possibly a snail shell (Mount 1978:20). Human skeletal remains consisting of incomplete left and right humeri, part of a possibly left tibia, and a long bone shaft fragment represent an adult of indeterminate sex (Fisher and Schermer 1987:91; Schermer 1989).

Mound 42 – conical

This mound was damaged by pot hunters prior to 1949 and was the subject of limited excavation performed in 1965 by Garland Gordon. Although no report was written, a 1965 crew member reported that nothing was found in this mound. The EFMO collections contain one potsherd from Mound 42. Reportedly, the mound fill contained red ochre (Mount 1978:20).

Mounds 43 and 44 – conicals

These mounds were damaged by pot hunters prior to 1949 and subjected to limited excavations by Garland Gordon in 1965. A crew member from the Gordon excavations reported that nothing was found in either mound. Mount (1978:21) reported that there was no cultural material in the EFMO collections for Mounds 43 and 44. However, Petersen (1986a:41) noted that the collections contained cultural material from both mounds.

Mound 45 – conical

Mound 45 was the subject of limited excavations conducted by Garland Gordon in 1965. The mound had previously been damaged by pot hunters. A chert projectile point is in the EFMO collections (Mount 1978:22).

Mound 48 – conical

This mound was excavated by Beaubien in 1950 (Beaubien 1952b:4, 1953b:64). No burials, other features, or artifacts were found (Ingmanson 1964:26–28; Mount 1978:22). Petersen (1986a:41) reported that the EFMO collections contained cultural material from this mound.

Mound 49 – conical

This mound was excavated by Beaubien in 1950 (Beaubien 1952b:4, 1953b:64), but no features or cultural material were found (Ingmanson 1964:26–28; Mount 1978:22). Petersen (1986a:41) reported that the EFMO collections contained cultural material from this mound.

Mound 52 – bear effigy

Mount (1978) reported that Garland Gordon performed some restoration work on this mound in 1965. What appeared to have been a vandal's pit in the upper neck of the bear was found to be damage caused by a tree root. Gordon excavated a 3 ft. by 4 ft. area over the disturbance.

13AM206 (MOUND 17)

Site 13AM206, Isolated Round Mound I, is EFMO no. 17. This conical measured 30 ft. in diameter and 2 ft. in height on Harry Orr's 1902 map of the "Yellow River Mound Group" (Orr 1939:84). Ellison Orr (1939:83) reported that it had been destroyed by cultivation by 1931. However, Mount (1978:13) reported that the mound was extant, although damaged by pot hunters prior to 1949. The mound was excavated by Garland Gordon in 1965 during mound rehabilitation experiments conducted by EFMO personnel (Husted 1971:19; Mount 1978). Mount (1978:13) reported that in 1965 over 80 percent of Mound 17 had been destroyed. Gordon opened up the central portion of the mound that had been damaged by vandals. Husted (1971:19–20) described the soil stabilization experiment. The excavated area was left open, with one wall sprayed with a polyurethane resin to test it as a soil stabilizer. The pit remained open from the summer of 1965 until late spring 1971. The walls had collapsed except the resin-treated portion. However, the soil behind the resin layer collapsed. The back dirt piles from 1965 were used to refill the mound. Charred tubular bone, probably from the vandals' pit, and grit-tempered pot sherds were included in the EFMO collections (Mount 1978:13)

13AM207 (MOUND 18)

Isolated Round Mound II, EFMO no. 18, is a conical mound that measured 45 ft. in diameter and 4 ft. in height when platted by Harry Orr in 1902 (Orr 1939:84). In ca. 1930, Ellison and Fred Orr excavated a 5-ft.-square pit in the mound center, finding no features or artifacts (Orr 1939:87).

Husted (1971:6) reported the mound appeared to have been vandalized. It seems likely that at least a portion of the damage Husted observed was from the Orr excavation. Restoration of the affected area (Husted 1971:6–12) was undertaken by EFMO maintenance personnel by removing the upper part of the pit and squaring it off. The squaring process expanded into two intersecting trenches; one running east-west was 2 ft. wide. The vandals' pit area was excavated into a rectangular unit measuring 7.5 by 6.5 ft. and extending to a maximum of 3.5 ft. deep. A circular area of burned earth, one-half inch deep, was noted on the north edge of the main excavation on the mound surface. Unburned human bone was encountered in the southeast corner of the unit between 1.5 and 3.5 ft. below the mound surface. The old excavation (Orr's?) had affected an area of the mound measuring 6 ft. long by 5 ft. deep. Stratigraphy of the pit wall consisted of a "complex layering of burned bone, black and gray earth, and salmon colored burned earth beneath the massive deposit of burned earth comprising much of the upper mound fill…" (Husted 1971:9). A total of 174 burned and unburned bones and fragments were recovered. The 2-ft.-wide trench was extended southward from the central pit for 6.75 ft. to intercept the south edge of the original excavation pit. Portions of human pelvis and two femora resting on a layer of burned earth were encountered 1.8 ft. south of the central pit and 0.7 ft. west of eastern trench wall. Bone, probably the left femur, was collected for radiocarbon dating, while the right femur and pelvis were left in situ and covered with earth. The area excavated by Husted was lined with black construction plastic, backfilled, and the mound was seeded with grass. Mount (1978:14) noted approximately 40 percent of the mound was excavated by Husted in 1971, and that human bone was in the EFMO collections.

The human skeletal remains were analyzed by Fisher and Schermer (1987:58–60). A total of 184 burned and unburned bone fragments were inventoried, representing a minimum of three individuals. A subadult less than 10 to 15 years of age and two adults of indeterminate sex were identified. One of the adults was probably 35 years old or older. Two small cranial fragments contained evidence of slight porotic hyperostosis.

13AM210

The Yellow River Village Site or FTD Site is a multicomponent Middle Woodland and Late Woodland habitation site with deeply buried earlier deposits as well. It is situated on property of the U.S. Fish and Wildlife Service but is adjacent to the EFMO boundary. Ellison Orr visited the site in 1923 and collected artifacts from the site surface (Benn and Thompson 1976). Garland Gordon also surface-collected at the site in 1968, and the material is accessioned under 13AM82 at EFMO. The site was partially destroyed in the early 1900s by construction of a railroad grade which now separates the NPS and FWS properties. The site was also eroded by water action after construction of Pool 10 on the Mississippi River. The Luther College Archaeological Research Laboratory conducted salvage excavations near the shoreline by (Benn 1978; Benn and Thompson 1976). Excavation was limited to four 1-m test squares, which produced Middle Woodland, Late Woodland, and Oneota ceramics. No human remains were found. Following the Luther College excavations and subsequent deep probing sponsored by the St. Paul District, Corps of Engineers, the site was partially protected by placement of riprap along the shoreline (Overstreet 1984).

13CT18

Site 13CT18, the Sny Magill Mound Group, is the largest remaining mound group in Iowa, consisting of almost 100 mounds, EFMO nos. 1–96. It includes two bird effigies, three bear effigies, six linear mounds, and over 85 conical mounds. T. H. Lewis mapped all but two of these mounds in 1885 (he did not map two of the linear mounds). An additional three conical mounds were identified by Petersen (1986a) and labeled by him as mounds A, B, and C. A wide-scale survey conducted at 13CT18 in 1987 and 1988 (Dial 1996a, 1996b) identified an additional 12 mound-like features, designated D through O. To date, the letter-designated features have not been given official EFMO numbers.

It has been speculated that Lewis may have conducted some excavations at the site (Petersen 1986a:67–68), but there is no direct evidence to support this conjecture. Mounds 7, 24, 27, and 43 were the subject of archaeological excavations by Paul Beaubien in 1952 (Beaubien 1953a, 1953b). At the time of his excavations, Beaubien (1953a:15) made a record of the condition of all the mounds at the site. He noted that four to five mounds had been destroyed by cultivation and could only be relocated with the aid of Lewis' map, while others had been damaged by construction or vandals (Beaubien 1953a:57).

More recent vandalism or mound erosion at Sny Magill has been reported on four occasions. Wahls (1988:59) noted artifacts eroding out of mounds on the edge of a cut impacted by inundation and wave action from the Mississippi River. In 1987, state archaeologist Bill Green reported erosion affecting mounds 16, 17, 19, and 20 (OSA 1987c). The erosion, caused by water from the Mississippi River, had destroyed approximately one-third of each of these mounds. In 1990, vandalism was reported to the Office of the State Archaeologist. An on-site inspection and follow-up work found vandal's pits in mounds 62 and 68 (OSA 1990a; Henning 1991). In 1991, Mound 43 was vandalized (OSA 1991).

Mound 7 – conical

Mound 7 measured 25.5 ft. in diameter and 1.4 high at the time of Paul Beaubien's excavation in the summer of 1952. Skeletal material from two individuals was recovered from 3 inches below the natural ground surface (Beaubien 1953a:45–53, 1953b:62). Burial 1 consisted of a compact bundle burial located 0.5 ft. west of the mound center. Most of the elements were present, and some were articulated, including the vertebrae and some ribs. Burial 2 was located south of Burial 1 and consisted of scattered remains including cranial and mandible fragments. Beaubien (1953a:46) noted that the teeth were well worn, with some having the pulp chambers exposed and one containing a carious lesion. Five parallel long bones were 2.9 ft. from Burial 1. Burial 2 appeared to have been disturbed by burrowing animals. Beaubien was unable to tell if the dispersed and parallel bones were from the same burial. Three triangular, unnotched projectile points were found at the same level as the burials within the area of the scattered remains. Henning (1998a) described the projectile points as "Oneota" points. Beaubien (1953a:2) associated this mound with the Late Woodland culture.

Mound 24 – conical

Mound 24 measured 37 ft. in diameter and was 3 ft. high. In 1952, Paul Beaubien's (1953a:40–44, 1953b:61) excavation removed up to 75 percent of the mound. The excavation started just west of the west edge of the mound and extended into the central portion of the mound. At the mound center, an area measuring 13 ft. by 9.5 ft was removed. A human calva was found 1.2 ft. west of the mound center at the natural ground surface. Chert debitage and charcoal fragments were also found in the mound. Pot sherds from two different vessels were recovered above the burial. Ceramic decoration consisted of smoothed over cord-impressions and rocker dentate patterning. Cultural affiliation of the mound, based on the ceramics, is Middle Woodland Hopewell (Beaubien 1953a:42). A radiocarbon date for Mound 24, AD 1520±200 (Tiffany 1981:61), was probably contaminated (Mount 1978).

Mound 27 – bird effigy

Mound 27 was excavated by Paul Beaubien in the summer of 1952 (Beaubien 1953a:35–39, 1953b:60). A trench ranging from 5 to 8.5 ft. wide and 3 to 4 ft. deep was dug along the central portion of the body (Beaubien 1953b:60). The trench, 5 ft. wide along the central body portion, extended from a test pit beyond the head to a point 36 ft. from the tail. The width was expanded to 8.5 ft. for a distance of 15 ft. between the wings (Beaubien 1953a:35). Twelve teeth from a child approximately 9 years old and an adult metatarsal were recovered from a rodent burrow at 1.8 ft. below the mound surface in the body portion between the wings. It is possible all the human remains were in a disturbed context resulting from bioturbation.

Mound 43 – conical

Conical Mound 43 was extensively excavated by Paul Beaubien in 1952 (Beaubien 1953a:16–34, 1953b, 1953c). At the time of the excavation, the mound measured 67.5 to 70 ft. in diameter and had a maximum height of 5 ft. The mound was constructed on an elliptically shaped intaglio 0.5 ft. below the natural ground surface and measuring 16 ft. north-south and 13.3 ft. east-west (Beaubien 1953a:16). The intaglio floor was covered with red ocher to a depth of 0.1 ft. A side scraper was recovered from this red ocher layer. A second layer, described as a depression, was located 1.6 ft. above the red ocher floor and contained most of the artifacts and burials recovered from the mound. This upper depression also contained layers of red ocher. Charcoal samples that yielded radiocarbon ages of 550 B.C.±250 and 480 B.C.±250, along with associated stemmed

points, large unstemmed bifaces, red ocher, and copper beads, support assignment of these stages of mound construction to the Red Ocher complex of the Early Woodland period (Tiffany 1981:61; 1986b).

The bundle burials were all badly decomposed except for the dental remains. Burial 1 was 3.3 ft. below the mound surface and 3.2 ft. northwest of the mound center on a layer of red ocher (Beaubien 1953a:18, 1953b:57). Three individuals were represented by two disarticulated skeletons and one consisting primarily of articulated elements. A photograph of the burial includes the information that the remains were from adults (Beaubien 1953a:33). Burial 2 was a disarticulated bundle burial found at 3.7 ft. below the mound surface and just a few inches west of Burial 1, resting on red ocher (Beaubien 1953a:18, 1953b:57). Burial 3 was just a few inches west of Burial 2 at 3.88 ft. below the mound surface, but no red ocher was associated with it (Beaubien 1953a:18, 1953b:57). The Burial 3 remains consisted of a flexed, articulated bundle burial, and was in better condition than the other three burials. Burial 4, also not associated with red ocher, was 1 ft. southwest of Burial 1 and 3.6 ft. below the mound surface (Beaubien 1953a:19, 1953b:57, 59). The remains consisted of four badly decomposed long bones in parallel order. Staining adjacent to the bones suggested that other elements had been present but were completely disintegrated.

Ten copper beads were recovered above the upper layer of red ocher and beneath a layer of ash. A straight-stemmed projectile point and large lanceolate blade were found a few inches northwest of the ash, in the red ocher layer. A second lanceolate blade and two copper beads were found east of the burials in a red ocher layer. The potsherds, 26 in all, were found within 2.4 ft. of the mound surface. They were described as similar to "Madison Cord Imprinted" (Beaubien 1953a:22) but in reality constitute part of a Lane Farm Cord-impressed vessel (Benn 1979:63). This pottery post-dates the mound's principal use by 800–1100 years and indicates addition of a cap to the mound or use of the mound's surface during early Late Woodland (pre-Effigy Mound) times. A similar pattern of an Early Woodland Red Ocher-related mound being added to around A.D. 300–650 occurs nearby at Mound 38 of the Turkey River Mound Group, 13CT1 (Green 1989; Green and Schermer 1988; McKusick 1964b).

Henning (1991) investigated vandalism to Mound 43 in August 1991. A hole measuring 7 ft. long by a maximum of 42 inches wide and 45 inches deep had been dug through the mound center. While backfilling, all the soil was screened. Fifteen human bone fragments were recovered, including two vertebrae. All the human remains were sent to the Midwest Archeological Center in Lincoln, Nebraska.

Mound 81

Paul Beaubien initiated excavations into Mound 81 in the summer of 1952. However, when he found that the mound had been vandalized, he ceased digging and backfilled the pit (Beaubien 1953a).

Area N – between Mounds 89 and 91

In 1988, bone fragments were uncovered during limited excavations conducted into a mound-like rise between Mounds 89 and 91 (Henning 1989). This feature, designated Area N (Dial 1996a, 1996b), was determined to be a mound as a result of the excavation. The fragments, originally identified as human cranial fragments, were determined by the author to be pieces of turtle shell (OSA 2001).

13CT26

The mounds comprising Marching Bear Mound Group, EFMO nos. 69–83, include 10 bear effigies, three bird effigies, and two linear mounds. Soils analysis testing conducted in 1958–1959 by W. H. Scholtes, Roger B. Parsons, and others, including trenching through mounds 73 and 81 (Parsons 1962). A 1961 assessment of the mound group (Anderson 1961) noted excavation depressions in mounds 69, 70, 71, 73, 76, and 81, and other surface depressions in mounds 78 and 82. An undocumented mound, discussed by Mount (1978) and referred to as Mound 88, had been disturbed by trenching. Restoration work was done to several mounds as part of the Mounds Rehabilitation Project (Gordon 1968:121; Ingmanson 1964:39, 41–49). Although no documentation exists of excavations conducted on Mound 71, the EFMO collections contain a bottle of charcoal fragments (Access. 64) noted to be from a Garland Gordon excavation (Henning 1998a). Petersen (1983) noted that a survey conducted by Luther College in the 1970s reported some past restoration work on Mound 82, but no records were available at EFMO.

An incomplete cranium labeled "CT26" was analyzed by Fisher and Schermer (1987) along with remains from 13CT231. It is described below under site 13CT231 as Individual 15.

Mound 72 – bear effigy

In the summer of 1961, John Ingmanson (1964:43) cleared a probable old vandal's pit just posterior to the front leg of this bear effigy mound. The disturbed area was enlarged to a pit measuring 3 ft. by 4 ft. by 2.5 ft. deep. Half of a large stone blade, three small grit-tempered pot sherds, and samples of charcoal were recovered. The excavation was backfilled. The EFMO collections contain a bottle of charcoal fragments and soil (Access. 65) from the Ingmanson excavation (Henning 1998a).

Mound 73 – bear effigy

Mound 73 was included in the 1957–1958 Soils Analysis Project at EFMO. A 3-ft.-wide trench was excavated. A soils description is provided in the testing results (Parsons 1962:24), but no features or artifacts are mentioned. The excavation trench was visible in 1961 (Anderson 1961:16).

Mound 77 – bear effigy

In 1961, a test pit was dug into the "heart" region of this apparently undisturbed bear effigy as part of the Mounds Rehabilitation Project (Ingmanson 1964:45–48; Mount 1978:30). A poorly preserved bundle burial was located at 2 ft. 10 inches below the mound surface on what may have been the original ground level. A layer of reddish soil, approximately 11 inches thick, was directly above the burial and was overlain with a 13-in.-thick layer of yellowish fill. Charcoal flecks were noted in the reddish layer above the burial. Chert flakes and fossiliferous limestone were present in the fill. Two samples of the charcoal were submitted for radiocarbon dating, with resulting dates of AD 375±100 and AD 625±100 (Tiffany 1981:61).

Mound 78 – bear effigy

There are no written records of restoration work done on this mound. However, a photograph from 1961, labeled "rehabilitation," depicts a 3-ft.-square, 8-inch-deep test pit in Mound 78 (Mount 1978:32).

Mound 81 – bear effigy

In the summer of 1958, Robert Bray (ca. 1958:2–3; Parsons 1962:24; Mount 1978:32) conducted excavations in Mound 81 as part of the Soils Analysis Project. A 3-ft.-wide trench was

dug through the center of the body of this bear effigy. No features were reported, but the investigation revealed that the mound had been built on an intaglio.

Mound 88 – unknown

Mount (1978:33) reported that a 1961 photograph in the EFMO documentation, labeled "Mound 88," refers to a mound within a campsite associated with Marching Bear Mound Group. The photograph depicts extensive trenching and rehabilitation work. The location and existence of this mound have not been verified.

13CT231

The Highway 76 Rockshelter, EFMO no. 101, is located on an expanded crevice in a limestone outcrop approximately 25 ft. above Highway 76. In addition to its use as a habitation and burial place, the shelter also contains petroglyphs. The main portion of the site was destroyed by blasting during construction of former Highway 13 (Logan 1976:70). Wilfred Logan conducted excavations at the site in 1954, referring to the site as the Highway Thirteen Rockshelter. A brief report of the recovered burials (Logan 1976:70–71) describes at least four subadults and scattered human bone in the floor midden. Additionally, an incomplete, flexed skeleton was noted outside the shelter in deposits that had been disturbed by blasting of the rock face. The burial and other rock were still clinging to a nearly perpendicular cliff face. This burial was left in place. Three infant burials consisting of nearly complete skeletons were recovered from the narrow crevice towards the back of the shelter. An older, subadult found in the fireplace area near the back of the crevice was represented by burned and unburned cranial remains. An occipital fragment and other unidentified bones found at the bottom of the cultural deposits were from this same individual. The cranium was nearly complete when reconstructed, and represented a child approximately 9 years of age at the time of death. Along with human and animal bone, Madison Cord-Impressed, Spring Hollow Cordmarked, and probably Levsen Stamped potsherds were recovered from the general midden (Logan 1976:71).

An osteological analysis of the remains from 13CT231 was conducted by Fisher (Fisher and Schermer 1987:10–14). A minimum of 15 individuals were represented, 12 subadults and three adults. Individual 15, one of the subadults, is discussed separately as these remains may not have come from this site. The 11 subadults (excluding Individual 15) include a fetus, 2 neonates, 3 infants 6 to 12 months old, and a 1 to 2 year old, a 4 to 5 year old, a 5 to 6 year old, an 8 year old, and a 10 to 12 year old that was possibly female. The three adults include a female of indeterminate age, a male 30 to 35 years of age, and a male 50 years old or older. Pathological conditions were limited to an adult vertebral body and incomplete right innominate from the adult female which displayed lesions "consistent with the slow-growing benign neoplasm designated as a chondromyxoid fibroma" (Fisher and Schemer 1987:11).

Several of the cranial fragments representing Individual 15 were clearly marked "CT26," but had been included in the same EFMO accession as the 13CT231 material. Age estimation was 11 years ± 30 months, based on development of the permanent maxillary dentition. The presence of cribra orbitalia was noted in the orbital roof. Although some of the cranial fragments were marked "CT26," the condition of the cranium and age estimation are consistent with the subadult cranium described by Logan (1976:70–71). In addition, there is no documentation of cranial remains recovered from any of the mounds at 13CT26. The evidence appears to suggest that provenience is more likely 13CT231.

In 1990, a reexamination of the Individual 15 cranium was conducted, at the request of Schermer, to record cutmarks not described previously. The incomplete cranium consists of the inferior fourth to third of the frontal; the inferior two-thirds of the left parietal; posterior third of

the right parietal missing the superior portion; the occipital missing the base area including the condyles and sella tursica; and the complete left and right temporals, zygomas, maxillae, palatine bones, and nasal bones. Over 400 cutmarks were recorded on this cranium, consisting primarily of short nicks in the range of 0.5 to 1.5 mm long. A few somewhat longer cutmarks are present on the frontal and occipital, with a single long cutmark at the superior edge of the left parietal, oriented superoinferiorly. In general, the cutmarks on the frontal and posterior of the occipital are oriented horizontally. Their location in areas of muscle attachment, such as on the mastoid processes, suggests they were more likely the result of defleshing rather than scalping. Two small areas of bone located just lateral and inferior to the left occipital condyle appeared to have been scraped with a sharp, bladed tool. One was ca. 0.5 cm in diameter. The other was ca. 0.5 by 1.0 cm, although the total affected area may have been larger as one margin was broken. The result was flattened areas where the ectocranial bone had been removed, leaving scrape marks.

Chapter 4. Native Peoples in the Study Region: Culture History

by William Green

This chapter reviews the prehistoric and early historic cultural history of the study region. The purpose is to summarize the cultural traditions whose archaeological traces are present at Effigy Mounds National Monument and in the surrounding region, supplementing and updating Logan and Ingmanson (1969:273–286). Emphasis is placed on the ways in which these early peoples interacted with the physical features and natural resources of the Upper Mississippi valley. The nature of any cultural affiliations that can be traced between these peoples and historic Indian groups is considered as well. The discussion is limited to archaeological data and to relevant ethnohistoric data relating to the region's history prior to ca. A.D. 1700. Chapter 5 presents information on the cultures and histories of subsequent groups.

Recognizing the importance of Effigy Mound resources to the existence and identity of EFMO, the Effigy Mound culture is not addressed in this chapter but is the concern of chapters 6 through 8.

PALEO-INDIAN CULTURES

Paleo-Indian peoples lived in the study region from about 11,300 to 9300 B.C. Earlier occupation is possible and has been documented for various parts of North and South America, but conclusive evidence is lacking so far in the Upper Mississippi Valley. Evidence of Paleo-Indian peoples in the study region is widespread but limited almost entirely to isolated finds of projectile points. The distribution of these artifacts, their raw materials, and their occasional associations with other artifacts have led archaeologists to define the Paleo-Indian tradition as characterized by small populations of highly mobile hunter-gatherers well adapted to late-glacial environments.

The Paleo-Indian landscape was vastly different from today's. Glacial outwash, meltwater, and cold, rushing torrents of water from rapidly-draining glacial lakes filled the Mississippi River trench at various times during the Paleo-Indian period. Dynamic hydrological conditions and rapidly changing climate led to widespread landform instability, particularly in the Mississippi valley and other large valleys. These conditions probably inhibited substantial Paleo-Indian settlement in the main valleys. Instead, the focus of human activity apparently was in the interior uplands and small tributary valleys. There, Paleo-Indians found more stable streams and springs, as well as chert and other raw materials for tool making. The interior also provided naturally sheltered areas for winter occupation, although no clear evidence of Paleo-Indian use of caves or rockshelters has yet been found. Few Paleo-Indian components of any kind have been found, possibly because dynamic Late Pleistocene and Early Holocene geological processes may have obliterated or buried traces of early occupation.

The Paleo-Indian subsistence base probably included a variety of resources from the mixed conifer and hardwood forests that covered the region. Large and small animals were hunted, including in all likelihood some extinct species such as mastodons. One of the main factors involved in siting base camps and other occupations probably was the availability of large game. Another important element affecting settlement patterns and mobility was the availability of high quality stone for tool making. Paleo-Indian flaked-stone industries were highly specialized,

reflecting great skill and requiring excellent raw materials. While some chert of acceptable quality was available in parts of the study region, prized raw materials from more distant sources—west-central Wisconsin, northwestern Illinois, even North Dakota—often were utilized.

Paleo-Indian traditions that utilized the study region are known by their diagnostic projectile point styles. Makers of the Clovis, Gainey, Folsom, Dalton, and Agate Basin point types all utilized the region, roughly in respective chronological order, between about 11,300 and 9300 B.C. Some form of relationship undoubtedly exists between the late Paleo-Indian forms (Dalton and Agate Basin) and succeeding Archaic cultures, but the nature of these relationships is extremely difficult to determine on the basis of present data. With over 11,000 years separating Paleo-Indian cultures from the Historic era, there is no feasible means to establish or even investigate Paleo-Indian cultural affiliations.

Bibliographic guide: Useful explications of Paleo-Indian dating and chronology are found in Fiedel (1999) and Taylor et al. (1996). Recent, broad-scale overviews of Paleo-Indians in eastern North America include Dincauze (1993), Ellis et al. (1998), and Meltzer (1988). Useful sources of information on Paleo-Indian peoples in the study region include Alex (2000), Boszhardt (1993), Mason (1998), Morrow and Morrow (1994), Palmer and Stoltman (1976), and Stoltman (1993, 1999).

ARCHAIC CULTURES

Archaeologists have defined the transition or interface between Paleo-Indian and Archaic cultures in several ways. One is to make the cultural boundary coeval with the geological Late Pleistocene–Holocene transition, dated in North America at ca. 10,000 RCYBP (radiocarbon years before present), or ca. 9300 calendar years B.C. (Fiedel 1999). Another way, related to the environmental changes that accompanied the end of the Pleistocene, is on the basis of subsistence economies: hunters of now-extinct big game are Paleo-Indians, while hunters of modern fauna are Archaic. Finally, the distinction may be made on the basis of technology: makers of lanceolate points are Paleo-Indians, whereas those who made notched or stemmed points are Archaic. In essence, archaeologists use one or more of these criteria to try to separate groups of people who maintained lifeways geared toward Late Pleistocene landscapes (Paleo-Indians) from those who occupied more familiar surroundings (Archaic).

Because of regional environmental diversity as well as technological variation, it is impossible to issue blanket, all-purpose pronouncements that classify cultures of the period of ca. 9300 B.C. as either Paleo-Indian or Archaic. These are, after all, categories defined by archaeologists to facilitate culture-historical reconstruction; they are not immutable taxa. However, throughout most of midcontinental North America the end of the Pleistocene does correspond to a time of technological change from the lanceolate-point complexes of the Agate Basin and Dalton traditions to a wide variety of stemmed and notched biface styles (Ellis et al. 1998). The behavioral and economic correlates of these environmental and technological changes vary between regions. The artifact assemblages in the study region, though, bespeak changes in settlement and subsistence patterns that apparently differ from Paleo-Indian patterns in being somewhat less mobile and in reliance upon resources of deciduous forests and riverine settings.

In general terms, Archaic occupations (ca. 9300–500 B.C.) are relatively well documented in the study region, especially in the interior uplands. Rockshelters and open habitation sites in Wisconsin and Iowa contain abundant evidence of utilization throughout this period. Many sites on alluvial fans, islands, and low terraces in the study region have produced a large amount of information on Archaic technologies and subsistence patterns. The archaeological record

indicates development of settlement systems marked by seasonal movement between large river valleys, upland areas, and rockshelters. Spanning nearly 9000 years, Archaic peoples of course maintained a great diversity of lifeways. Throughout this era there were substantial changes in natural environments as well as in the inhabitants' technologies, subsistence economies, settlement systems, and interaction patterns. Some of the cultural diversity of the Archaic is effectively expressed in the three-part classification system most archaeologists apply to this period, as summarized below.

During the Early Archaic (ca. 9300–5000 B.C.), highly mobile hunting groups thrived throughout the newly established early Holocene deciduous forests. With the extinction or extirpation of most of the previous era's large game, hunting probably focused on white-tailed deer. However, little direct evidence exists of the nature of the Early Archaic subsistence economy, a possible association with extinct peccary notwithstanding (Palmer 1974). Because of the continuing high demand for good-quality stone for tool making, Early Archaic people made repeated use of several quarry and workshop sites such as the Bass site in Grant County, Wisconsin (Stoltman et al. 1984). A few rockshelters also indicate Early Archaic use, such as the Keystone rockshelter in Jackson County, Iowa (Anderson 1987). The more commonly recorded Early Archaic site type in the region is the small, diffuse scatter of flaking debris, projectile points, other tools, and some fire-cracked rock (Collins and Green 1988). These kinds of sites represent short-term occupations often termed hunting camps, bivouacs, resource procurement loci, or simply "open habitations." Many or most of these sites likely represent temporary camps of small groups who dispersed themselves throughout the region, especially during the cool seasons (Walthall 1998). Warm-season aggregation sites probably were relatively few in number and located near particularly important natural resources such as chert or abundant food sources. No evidence of Early Archaic mortuary practices has been reported from the study region.

The Middle Archaic (ca. 5000–1500 B.C.) period is marked by the addition of copper and ground- and polished-stone technologies. In addition to "Old Copper" tools and grooved stone axes, diagnostic Middle Archaic artifacts include the side-notched projectile points that usually form a good portion of most sizable artifact collections from uplands in the region (Collins and Green 1988; Stanley 1989). Settlements continued to be dispersed across the landscape at open habitation sites as well as rockshelters and probably were occupied within seasonal rounds like those established during the Early Archaic. Prairie-edge upland areas may have been attractive hunting zones for deer and elk. However, there appears to have been a greater focus of residential and resource procurement activity in the large valleys. The Middle Archaic provides the earliest clearly recognized evidence in the region of ceremonial and mortuary activity. Seasonal or longer-term aggregation sites in the Mississippi and Wisconsin river valleys apparently included communal burial loci, used repeatedly by groups that were establishing territorial ties to different parts of the region (Freeman 1966; Overstreet 1988; Ritzenthaler 1957; Stoltman 1998). Multiple-interment burials in ossuaries, often associated with various tools and weapons, have been found at the Price site in Richland County and the Osceola site in Grant County, both in Wisconsin. Elsewhere in the Midwest and Eastern Woodlands, Middle Archaic mound building, sedentism, and nascent horticultural activities have been documented (Brown and Vierra 1983; Smith ed. 1992).

Some authors have correlated these Middle Archaic characteristics with population increase, territorial infilling, and regional climatic and vegetational change. The environmental factors might not apply everywhere, but paleoclimatic data from the study region show that this period was the warmest and driest on record (Baker et al. 1992, 1996, 1998). This was the time when prairies expanded into the region, and it is likely that streamflow and water-table levels were depressed, especially in upland headwater locales. These hydrologic changes may have

influenced populations to aggregate in the major valleys where water sources and related wetland and forest resources were more abundant and more predictably available. Such aggregations then would have promoted the territoriality and communalism noted above. Dry conditions also led to landscape instability, and cycles of erosion caused by droughts and storms led to formation of alluvial fans and stream channel incising. The resulting increases in disturbed-ground habitats may have fostered temporary increases in certain useful resource types such as annual plants with starchy seeds, plants that would later form the basis for the native horticultural system.

Late Archaic peoples (ca. 1500–600 B.C.; Stoltman 1998) continued to maintain an economic system that emphasized hunting, fishing, and gathering. As earlier, these people probably utilized several camps in various landscape positions throughout the year. Rockshelters continued to serve as important cool-season habitation sites. Burial sites are not known as they are in the Middle Archaic, but we may not know exactly what to look for. The regional environment became somewhat cooler and moister, approximately reaching modern norms. Consequently, vegetation patterns stabilized into the prairie and forest mix that characterized the early Historic period (Baker et al. 1992; Chumbley 1988).

The Late Archaic ends around 500–600 B.C. with the evidence of the earliest burial mounds and pottery in the region (see below). The final Late Archaic phase, the Durst phase, dates to the interval of 1000–500 B.C. and is well represented by occupation material at rockshelters and open sites (Stoltman 1998). No Durst points have been found in association with pottery or mounds even though the radiocarbon evidence suggests there might be some temporal overlap between the Durst phase and Early Woodland mounds. For example, one Durst site on the lower Turkey River in Clayton County, Iowa, has been dated to 630 BC ± 70 (uncalibrated), while the nearby Early Woodland mounds at the Turkey River (13CT1, mound 38) and Sny-Magill (13CT18, mound 43) groups date to ca. 500–600 B.C. (Green 1990; Green and Schermer 1988; Tiffany 1986b). This evidence suggests several possibilities: (1) there was an abrupt cultural discontinuity, possibly a displacement, at the Late Archaic – Early Woodland interface, or (2) the Durst phase represents some of the domestic, non-ritual material of the people who built the Early Woodland mounds, or (3) radiocarbon ages are telescoped into the tight period of ca. 600–500 B.C. because of fluctuating atmospheric radiocarbon production during the interval of ca. 800–400 B.C. (an effect known in Europe as the Iron Age radiocarbon disaster), creating the illusion of coexisting phases when a more gradual transition may have been possible (Goldman-Finn et al. 1991). We believe either the first or third interpretations, or a combination of them, is probably the most reasonable scenario.

Regarding possible cultural affiliations of Archaic peoples, it does not appear possible to bridge the 2,500–11,000 gap between now and then in any meaningful way. We do not know how the various Early, Middle, and Late Archaic populations may have been related to each other, much less how they may relate to more recent peoples. The nature of the Late Archaic – Early Woodland transition is one of many key issues regarding Archaic peoples and identifying some of their possible descendants.

Bibliographic guide: Useful overviews of Archaic cultures in the study region and surrounding areas include Benchley et al. (1997a), Gibbon (1998), and Stoltman (1992; 1998). Surveys that indicate the widespread distribution of small Archaic sites include Arzigian (1981), Benn and Bettis (1979), and Theler (1981).

WOODLAND CULTURES

Increasing numbers of Woodland peoples occupied the region between ca. 500 B.C. and A.D. 1000. Woodland habitation sites are abundant on islands, terraces, alluvial fans, and bluffs, and in rockshelters. The seasonally shifting settlement pattern established during the Archaic continued, although more permanent settlements were established and large mound groups were built to serve as cemeteries and ceremonial places. Increasing sedentism also is reflected in the adoption of ceramics and horticulture and by extensive shellfish utilization. Trade networks connected the study region with much of North America, as evidenced by the presence of exotic raw materials and artifact styles derived from distant areas. Early and Middle Woodland people built conical mounds, while effigy mounds, built during the Late Woodland period between ca. A.D. 650 and 1050, constitute the most distinctive above-ground structure type surviving from the prehistoric era in the Upper Mississippi Valley. The study region is located near the southwestern corner of the distribution of effigy mounds but contains one of the greatest concentrations of effigy and other mounds in the Midwest. Although 80 percent or more of these mounds have been destroyed (Petersen 1984), many are protected within EFMO and other parks and preserves such as Pikes Peak State Park and the Turkey River and Fish Farm state preserves in Iowa, and Wyalusing State Park in Wisconsin. These tracts and others in the study region also contain important and well preserved Woodland habitation sites.

During the Early Woodland period (ca. 500 B.C. – A.D. 100), very shortly after the Late Archaic Durst phase, two distinctive cultural complexes occupied the study region sequentially. The first, ca. 500 – 100 B.C., is represented by the Ryan focus or phase and the Indian Isle phase. Ryan refers principally to the Red Ocher-related mortuary material at Turkey River (13CT1, mound 38), Sny-Magill (13CT18, mound 43), French Town (13CT166, mound 10), Ryan (13AM117, mound 2), and Houlihan (also 13AM117) (see Benn 1979:51–53; Logan 1976:142–146; Tiffany 1986b:160–165). The funerary objects include exotic material such as copper, marine shell beads, and bifaces made of Indiana hornstone and Knife River flint (from North Dakota), The Ryan phase also may include straight-stemmed projectile points and the earliest known pottery in the region, known as Marion Thick (Green 1989; Tiffany 1986b:165), although the unclear association of such material locally with the Red Ocher burials has caused it to be grouped within the local Indian Isle phase (Stoltman 1990:242–244). Cultivation of squash at this time is documented in southeastern Minnesota (Perkl 1998). The Red Ocher mortuary ritual material and features are quite similar to those found elsewhere in the Midwest and indicate extensive extra-regional connections for the local populations (Esarey 1986; Green and Schermer 1988; Logan 1976:146; Ritzenthaler and Quimby 1962). The early pottery and squash appear in the region either along with the Red Ocher complex or soon thereafter, ca. 500 B.C.

Following the Ryan and Indian Isle phases is the second local Early Woodland culture, represented by the Prairie phase, ca. 100 B.C. – A.D. 100 (Stoltman 1986b, 1990). Many Prairie phase sites are known in the study region, nearly all of which are situated in the floodplain or adjacent terraces. Prairie phase peoples were strongly oriented toward local floodplain resource exploitation, exemplified by the shell middens that characterize several sites (Theler 1986, 1987), but they probably moved out of the floodplain into rockshelters or sheltered valleys at least in the winter. The population level apparently was higher than it had been during the Ryan and Indian Isle phases, but this may reflect the emphasis on shellfish harvesting, which leaves highly visible archaeological residues. No definite Prairie phase burial sites have been found, so mortuary patterns are unknown.

The Middle Woodland period (ca. A.D. 100–500) is well represented in the study region by numerous burial mounds as well as habitation sites. During the Middle Woodland period, the

Hopewell Interaction Sphere connected societies throughout central North America. Finished artifacts and raw materials from numerous exotic sources circulated through this network or were acquired from distant locations. Finely crafted blades, pipes, beads, breastplates, ornaments, pottery, and other objects are found at sites hundreds of miles from the materials' sources. Although the mechanisms of their movement (through direct acquisition, down-the-line exchange, or other means) are not known, it is fairly clear that this interaction was not centrally directed or controlled. People in hundreds of communities throughout the continent had access to these materials, and while it is likely that groups of traders or craftspeople focused much of their energy on their manufacture and exchange, full-time craft specialization probably was uncommon if it appeared anywhere. The motivations for manufacture, acquisition, exchange, and disposal of these objects is unclear. Along with the movement of such material was a mortuary complex that involved construction of similar tombs and mounds throughout the Midwest, as well as domestic, utilitarian artifacts such as cooking pots, projectile points, and knives, that share similar styles across large regions.

Local Middle Woodland phases relating to the period of Hopewell interaction are the McGregor and Trempealeau phases, defined for Iowa and Wisconsin, respectively. There is no real difference between the phases. Both are characterized by Hopewell-like mortuary features and materials, and by Havana-like utilitarian ceramics and stone tools similar to those found across much of the Midwest. Everyday life is not well documented, but the floodplain and aquatic resource orientation that characterized the Prairie phase seems to have carried over into McGregor/Trempealeau times.

Benn (1979) and Stoltman (1979, 1990) supply information on the Hopewell-related Middle Woodland people in the study region. Specific discussions of a few of the categories of exotic materials brought into the region from the northern Great Plains and Rocky Mountains are provided by Billeck (1991) for obsidian, Boszhardt (1998) for chert, quartzite, and pipestone, and Clark (1984) for Knife River flint. Middle Woodland sites within or adjacent to the EFMO boundaries with Hopewell connections include the FTD site (13AM210; Benn and Thompson 1976; Benn 1978), Mound 33 (Fire Point, 13AM190; Logan 1976; Orr 1939; Schermer 1989), and Mounds 55 and 57 (Nazekaw Terrace, 13AM82; see Beaubien 1953c; Mount 1978). The radiocarbon date from Mound 33 is an acceptable AD 200±300, but the date from Mound 55 appears to be about 1000 years too recent and is considered to have been contaminated (Mount 1978; see Appendix B, this report). Mound 24 at Sny-Magill (13CT18) also is reported to be Middle Woodland, although diagnostic artifacts are sparse and the radiocarbon date is 1500 years too late (see Appendix B, this report).

Immediately following the Hopewell-related McGregor and Trempealeau phases are the Allamakee and Millville phases, again Iowa and Wisconsin names for essentially the same complex. During this time, ca. A.D. 200–400, local groups continued building mounds of some complexity but without the exotic material of the previous period (Benn et. al. 1978, 1993; Logan 1976), and some earlier mounds were capped with new deposits (Green 1989). Artifact forms carried forth some of the earlier Middle Woodland styles, in particular the use of stamps to impress dentate-shaped designs on pottery vessels. Shell middens again occur, and an added dimension of sedentism is indicated by small, nucleated villages on high terraces and by storage pits and evidence of cultivation of native crops (Arzigian 1987; Freeman 1969; Stoltman 1979, 1990). Population levels seem to have been higher than ever before, with sites of this era appearing on landforms throughout the study region.

The early Late Woodland period is represented locally by the Lane Farm and Mill phases in Iowa and Wisconsin, respectively (Stoltman and Christiansen 2000:499–501). Dating to ca. A.D. 500–700, they occupy the interval between the end of the Middle Woodland and the appearance

of the Effigy Mound culture. Continuities with the Millville and Allamakee phases are evident in ceramic style: rocker-stamped decorations still occur, but on vessel bodies rather than on rims. The rim areas were decorated with series of twisted cords, a hallmark of Late Woodland pottery surfaces throughout eastern North America. Pottery of the Lane Farm and Mill phases thus forms a classic transitional artifact type as it retains traditional Middle Woodland motifs in one portion and adds the new Late Woodland style in another.

During this period, local people continued to build conical burial mounds and live throughout the region largely as their predecessors had. Extensive shell middens date to this time, as does a habitation component at the FTD site (13AM210; Benn 1978:250). In many parts of the Midwest the bow and arrow had been introduced by this time, but there is no firm evidence that the bow and arrow was used in the study region until the Effigy Mound culture.

The Effigy Mound culture arose around A.D. 650–700 and is represented in the study region by the Keyes phase in northeast Iowa and the Eastman and Lewis phases in southwestern and west-central Wisconsin. Effigy Mound and post-Effigy Mound Late Woodland cultures are treated in a separate series of chapters in this report (chapters 6–8). Based on ceramic similarities between early Late Woodland (Lane Farm Cord-impressed) and Effigy Mound ceramics (Madison Cord-impressed and Madison Fabric-impressed), some level of continuity between those complexes is indicated. The preceding Allamakee and Millville phases, in turn, appear to be local predecessors for the Lane Farm and Mill phases. However, the McGregor/ Trempealeau material may well have been intrusive and short-lived locally.

Bibliographic Guide: Several good regional Woodland overviews have been published: Benchley et al. (1997c), Benn (1979), Logan (1976) Stoltman (1990). Surveys that have located large numbers of Woodland sites on terraces and islands near EFMO include Halsey (1972, which includes an excellent bibliography of regional literature), Overstreet (1984), Stoltman et al. (1982), and Wahls (1988).

LATE PREHISTORIC: MIDDLE MISSISSIPPIAN AND ONEOTA

Significant cultural changes that occurred around A.D. 1000–1100 mark the end of the Effigy Mound culture and the transition from the Late Woodland period to Late Prehistoric traditions. The two principal Late Prehistoric traditions that were present in and around the study region were the Middle Mississippian and Oneota traditions. For a short time, Late Woodland people in the study region were interacting with Middle Mississippian people from southwestern Illinois and with Middle Missouri people from northwestern Iowa (Finney 1993; Finney and Stoltman 1991; Tiffany 1982). Accompanying and probably related to these interactions in the region were several substantial cultural changes readily visible in the earliest Mississippian and subsequent Oneota communities in the region: agriculture became a central focus of the subsistence economy, settlements became larger and more permanent, mound construction nearly ceased, territories became more clearly demarcated, ceramic industries and styles changed, and warfare increased.

Some archaeologists characterize the Woodland – Oneota transition as an in-situ transformation influenced in various ways by Middle Mississippian contacts, while others view Oneota as a different population that displaced or absorbed Effigy Mound and other Late Woodland peoples. The nature of the Late Woodland – Late Prehistoric interface bears directly on the fate of the Effigy Mound people and their possible cultural affiliations, and it is a complex and controversial subject. If there is a clear and direct Effigy Mound – Oneota connection ca. A.D. 1000–1100, and then a clear Oneota – Chiwere (or other historic group) connection ca.

1700, arguments for relationships of shared group identity and thus cultural affiliation between Effigy Mound and Chiwere or other groups might be supported. If group continuities or other evidence of shared group identity appear to be lacking at some point in that sequence, cultural affiliation might not be indicated. Because this issue is of key importance in assessing Effigy Mound cultural affiliation(s), it is addressed in detail in Chapter 8.

The era between ca. 1200 and 1700 saw occupation of the Upper Mississippi valley by Oneota peoples. Within the study region, Oneota sites are nearly absent from the EFMO–Prairie du Chien locality and other areas. Oneota is abundant only in the Upper Iowa Valley and nearby small valleys in southeastern Minnesota (Betts 1999; Henning 1961; Hollinger 1997; Keyes 1927; Orr 1914, 1937b; Stanley 1993; Wedel 1959; Withrow 1988; Withrow et al. 1991). These localities constitute the southwestern parts of the concentration of Oneota settlement in the La Crosse region. Site types include villages and cemeteries as well as small camps and, probably, enclosures. Some Oneota villages contained large long-house structures in which several families lived. Burials often were placed under these longhouse floors. Oneota burials also were made in non-mounded cemeteries and occasionally were placed into earlier Woodland mounds. Oneota people probably made many of the petroglyphs and pictographs that are found on sandstone outcrops and rockshelter walls in the region (Stanley 1994, 1997). In the La Crosse locality, population density was high and large complexes of ridged agricultural fields were built to maximize production of corn and other crops. The scarcity of Oneota sites in the Prairie du Chien and Turkey River localities may reflect temporary use rather than permanent settlement by Oneota groups there and may help identify buffer areas or boundaries between densely occupied polities of the La Crosse region and those elsewhere.

It is unclear whether an Oneota group continuity can be identified for the Upper Iowa River valley and, if so, how it related to the well defined group continuity of the La Crosse locality (Boszhardt 1994, 1999). Oneota in the Upper Iowa valley was clearly closely related in some way to Oneota at La Crosse. The post-A.D. 1600 protohistoric Oneota occupations in southeast Minnesota and northeast Iowa (Orr focus, now Orr phase) have been considered to represent a settlement movement by Chiwere peoples who had been resident at La Crosse since ca. 1300 (Sasso 1993; Withrow 1988; Withrow et al. 1991). In addition to this late occupation, there appears to have been an earlier resident Oneota population in the Upper Iowa River valley, present by A.D. 1250–1300 and represented at the Grant (13AM201) and Lane Enclosure (13AM200) sites (McKusick 1973; Hollinger 1997). These occupations may be closely related to the nearby La Crosse Oneota complexes (Henning 1998b:368–370) but pre-date the apparent westward movement from La Crosse. They may constitute early elements of a local Upper Iowa River valley group continuity that culminated in the highly visible Orr phase occupations that probably represent the Ioway and perhaps Oto tribes (Hollinger 1997).

Bibliographic guide: Oneota research in northeastern Iowa relies on work by Keyes and Orr, usefully summarized by Wedel (1959). The recent *Wisconsin Archeologist* volume on Oneota taxonomy (Hollinger and Benn ed. 1999) covers local and regional culture history. Other compilations (Gibbon ed. 1982; Green ed. 1995; Overstreet ed. 1993) also contain useful chapters on different aspects of Oneota studies. The Oneota Bibliographic Database (Zimmerman 1997; http://www.uiowa.edu/~anthro/oneota/obib.html) contains an extensive annotated bibliography.

PROTOHISTORIC ERA

The interface between prehistory and written history occurred in the mid- to late 17th century in the study region. French records indicate the presence of the Iowa (Ioway) people in the Upper

Iowa River Valley in that era. Mildred Mott Wedel's classic application of the Direct Historical Approach led her to suggest that several of the mid- to late-17th century Oneota archaeological sites in the Upper Iowa Valley may represent the protohistoric Ioways and possibly the Otos (Mott 1938; Wedel 1959, 1976, 1986; see also Griffin 1937; Keyes 1927). Subsequent archaeological studies have supported this likely Ioway or Oto affiliation of at least some of the late Oneota sites in this region (Betts 1999; Hollinger 1997; Withrow 1988; Withrow et al. 1991).

In addition to these Chiwere groups, other tribes briefly occupied the region in the mid–late 1600s. Although clear archaeological traces are few, their presence, as Betts notes, "clouds the assignment of specific ethnicity to historic materials":

> Historic documents indicate that the tumultuous political environment of the second half of the seventeenth century forced a variety of ethnic groups into the La Crosse region [including the EFMO locality]. The earliest recorded, the Ottawa and Huron, are thought to have passed through the area in the 1650s while fleeing the onslaught of the Iroquois, although their occupation of this area was brief (Wedel 1976, 1986). At least two other Native American groups resided in the La Crosse region between 1650 and 1690. In the early 1670s the Kickapoo and Miami fled their homelands due to social strife and subsequently sought refuge in the La Crosse region. A small contingent of the prairie Kickapoo are known to have resided in this area for at least four years, residing along a smaller drainage to the north of the Upper Iowa River, either Winnebago Creek, Crooked Creek, or the Root River (Wedel 1986:36–37). French trader Michael [Michel] Accault is reported to have traded with the Kickapoo during their stay in this area (Wedel 1986:37). Minimally, these groups must be considered as potentially affiliated with historic trade items that date to the second half of the seventeenth century that are not associated with diagnostic Oneota materials. [Betts 1999:234]

Though their stay was short, the position of the Kickapoos in the region was so well established that in the early 1700s the French labeled the Upper Iowa River as "Rivière des Kicapoos" (Mott 1938:271). After the Ioways moved west in the 1680s or 1690s, and following the short-lived Ottawa, Huron, Kickapoo, and Miami presence, several other tribes are documented as living in the region on a long term or temporary basis. The Ho-Chunk (Winnebago), Eastern Dakota, Sac, and Meskwaki (Fox) were among the tribes that resided in the region in the 18th and 19th centuries. A few archaeological sites that date to this period probably represent one or more of these groups (Logan 1976:21; Orr 1935a:129–130). For details on these tribes, see Chapter 5, this report.

Bibliographic guide: Mott (1938) is the classic source. For updates see the sources cited above.

Chapter 5. Tribal Culture Histories

by Larry J. Zimmerman

This chapter presents summary culture histories of the Ho-Chunk (Winnebago), Ioway, Oto, Missouria, Sauk, Fox (Meskwaki), Omaha, and eastern Dakota tribes. The histories are in no way intended to be definitive. Many dates and descriptions of events vary from source to source, and whether the individual documenting the event relied on non-Native or Native sources. Most of the sources used are published works by historians and anthropologists, but some derive from tribal members. For the Winnebago and Sauk and Fox summary histories, Lee Sultzman's (1999a, 1999b) work provides the core history, generally used verbatim, but with alterations added as noted. Similarly, Barry Pritzker's (1998) summary provides a core for the culture history of the Eastern or Dakota Sioux. Tribal names used here are those used in the original sources, but the official tribal designations for the tribes commonly known as Winnebago and Fox are Ho-Chunk and Meskwaki, respectively. Annotated bibliographies for each tribe and for generally useful sources follow the bibliography at the end of the report.

Areas of tribal cessions are shown on Figures 4 and 5 and are listed on Table 3. The areas shown are the Royce areas (Royce 1899) as used by the Indian Claims Commission. Appendix E provides copies of the relevant treaties that refer to these areas. Some of the tribes involved in these treaties and noted elsewhere in this report (e.g., Chippewa, Menomini) had only ephemeral involvement in the study region and so are not treated in the following culture histories.

HO-CHUNK, WINNEBAGO

There are several Winnebago histories, many emphasizing different segments of tribal activity at varying levels of detail (Lawson 1907; Lurie 1960, 1978; Pritzker 1998; Radin 1923:1–55; Smith 1986, 1996; Spector 1974; Sultzman 1999b). They are based on varying combinations of oral and documentary sources, and all are not consistent. Lee Sultzman's is the most recent and is used directly as the base source, without detailed citation, but with thanks, as the core of the summary below. Some materials and prose have been deleted or altered in that they are extraneous to a direct assessment of Winnebago history or for grammatical clarity. In examining a wide range of materials, one notices that there are occasional and usually minor differences in numbers or dates. Materials from others such as Nancy Lurie or David Smith have been added as needed for clarity or a broader perspective.

Although there are several explanations for the derivation of the tribal name Winnebago, scholars generally acknowledge its Algonquian origin, a Fox word "Ouinipegouek," or the Potawatomi "winpeyko" as "People of the Filthy Water, " referring to Lake Winnebago and the Lower Fox River which became clogged with dead fish every summer, or variously, due to algae rich waters of the rivers. The French translated this into *Puan* or *Puants,* which then was translated into English as "Stinkards." Calling themselves *Hochungra,* which has variously been translated as "people of the Big (Real, or Parent) Speech (voices)" or Great Fish (Trout) Nation (Pritzker 1998:678; Smith N.d.:1), the people today use two terms, with Ho-Chunk (also spelled Hocak) designating the part of the nation resident in Wisconsin and Winnebago those living in Nebraska.

According to a history of the Winnebago Tribe of Nebraska published on the Little Priest Tribal College web site, "The Winnebago people are the descendants of the Mound Builders who built ceremonial, temple, and effigy mounds from 200 BC to 1600 AD in the states of Kentucky, Illinois, Iowa, and Wisconsin." Part of Siouan speaking people in pre-Contact times, when they entered Wisconsin is difficult to determine, but by all accounts, they were in the region before the 17th century. Winnebago Tribal Historian David Smith (1986) mentions two theories about their
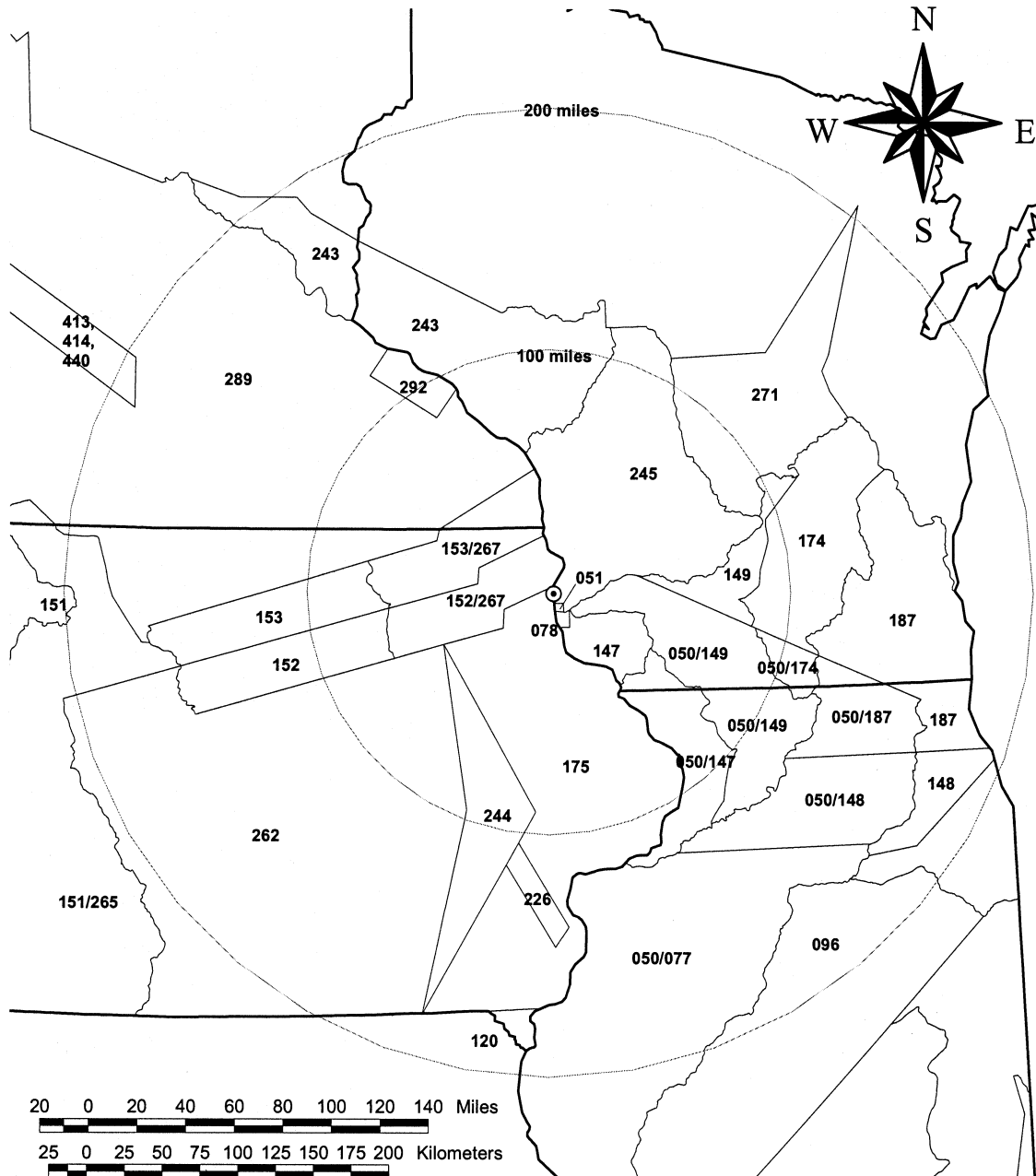
Figure 4. Royce Areas (Royce 1899) used by the Indian Claims Commission, and 50- and 100-mile radii from EFMO.

a) Chippewa, Ottawa, Potawatomi
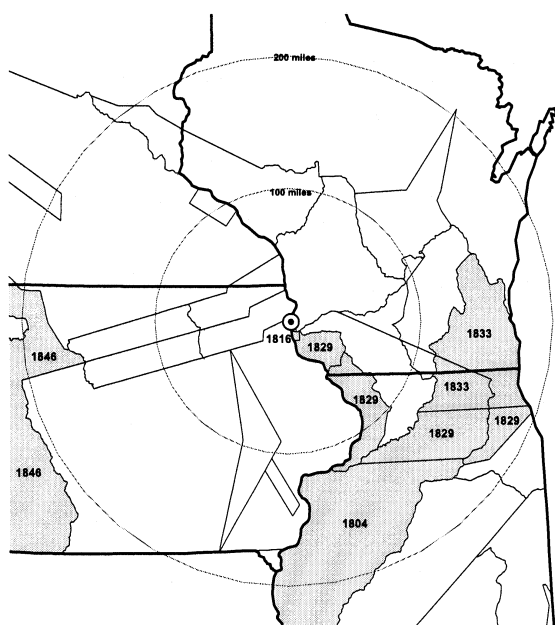
b) Winnebago
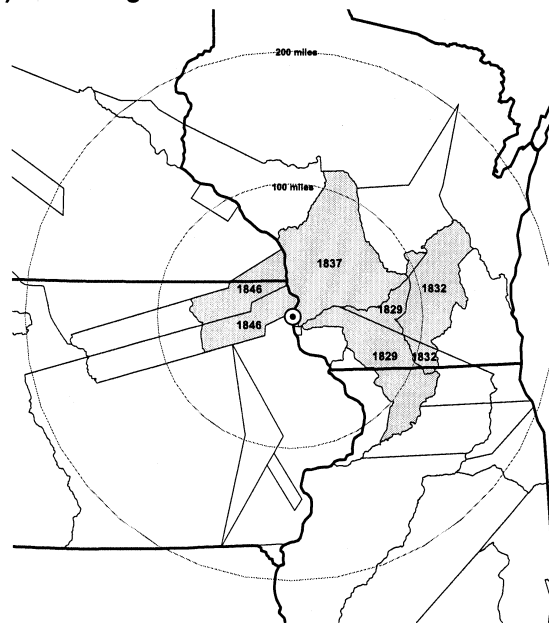
c) Sauk and Fox
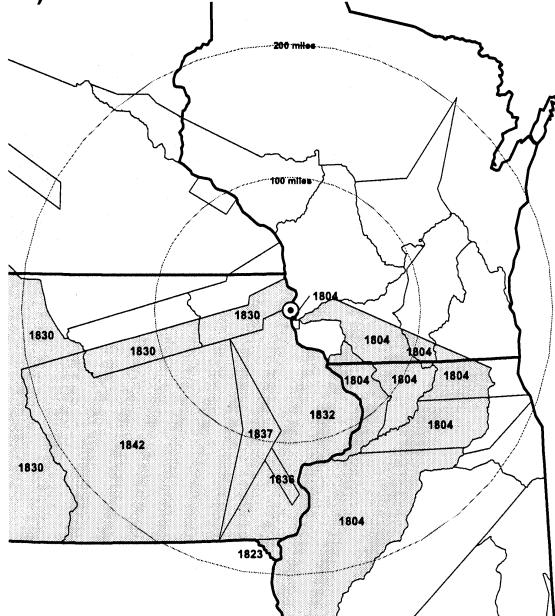
d) Sioux
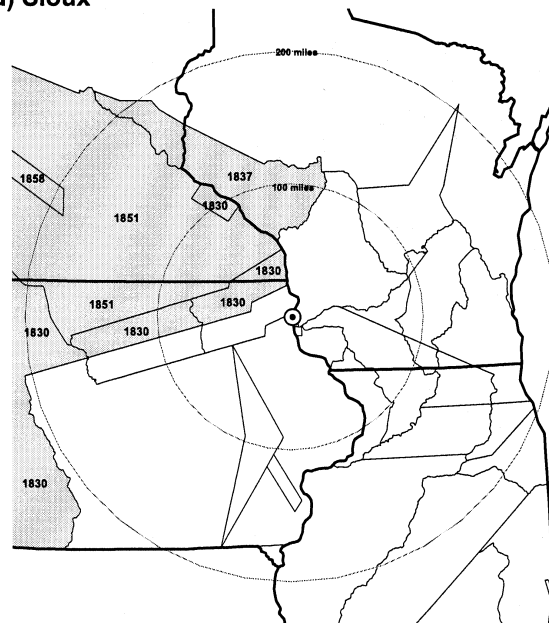
Figure 5. Ceded areas identified by tribe and treaty date.

Table 3. Key to Royce Map Numbers.

Royce Area No.	Tribe Name	Date	Statute	Royce (1899) Page
48	Cahokia Illinois Confederacy Kaskaskia Mitchigamia Tamaroa	Aug. 31, 1803	Stat. L., vii, 7	664
50	Sauk and Fox	Nov. 3, 1804	Stat. L., vii, 84	666
51	Sauk and Fox			
77	Chippewa Ottawa Potawatomi	June 4, 1816	Stat. L., vii, 14	680
78	Chippewa Ottawa Potawatomi	Aug. 24, 1816		
96	Cahokia Illinois Confederacy Kaskaskia Mitchigamia Tamaroa	Sept. 25, 1818	Stat. L., vii, 1	692
110	Kickapoo	July 30, 1819	Stat. L., vii, 20	696
120	Sauk and Fox	Aug. 4, 1823	Stat. L., vii, 23	706
147	Chippewa Ottawa Potawatomi	July 29, 1829	Stat. L., vii, 32	722
148	Chippewa Ottawa Potawatomi			
149	Winnebago	Aug. 1, 1829	Stat. L., vii, 32	724
151	Iowa Missouri Omaha Oto Sauk and Fox Sioux	July 15, 1830	Stat. L., vii, 32	726
152	Sauk and Fox			
153	Sioux			
174	Winnebago	Sept. 15, 1832	Stat. L., vii, 37	736
175	Sauk and Fox	Sept. 21, 1832	Stat. L., vii, 3	
187	Chippewa Ottawa Potawatomi	Sept. 26, 1833	Stat. L., vii, 43	750
226	Sauk and Fox	Sept. 28, 1836	Stat. L., vii, 52	762
243	Sioux	July 29, 1837	Stat. L., vii, 5	766
244	Sauk and Fox	Oct. 21, 1837	Stat. L., vii, 54	
245	Winnebago	Nov. 1, 1837	Stat. L., vii, 54	768
262	Sauk and Fox	Oct. 11, 1842	Stat. L., vii, 59	778
265	Chippewa Ottawa Potawatomi	June 5, 1846	Stat. L., ix, 85	
267	Winnebago	Oct. 13, 1846	Stat. L., ix, 87	780
271	Menomini	Oct. 18, 1848	Stat. L., ix, 95	
289	Sioux	July 23, 1851	Stat. L., x, 949	784
292	Sioux	July 15, 1830	Stat. L., vii, 32	726
413	Sioux	June 19, 1858	Stat. L., xii, 10	820
414	Sioux		Stat. L., xii, 10	
440	Sioux	March 3, 1840	Stat. L., xii, 81	826

arrival in Wisconsin. In one, they entered Wisconsin from the Southeast seeking new territory to settle and hunt. In the other, they came from an area north of the Great Lakes. They certainly formed the most powerful entity in the area, but soon began a process of fission and substantial population movement. Many Ho-Chunk also believe that the tribe has always lived in Wisconsin, citing the Red Banks locale on the Door Peninsula as the original homeland.

According to tribal traditions, the other Chiwere speakers (Missouris, Iowas, and Otoes) left the main Winnebago body in search of game sometime before 1600 and migrated westward, leaving the main body of the Winnebagos on the shores of Lake Michigan (Smith 1986:7). Lee Sultzman (1999b) posits that the movements may have resulted from climatic change around 1400. He notes that three closely related tribes—Ojibwe, Potawatomi, and Ottawa—began moving west along the shore of Lake Huron. The Ottawa stayed at Manitoulin Island, but the Ojibwe occupied the north shore of Lake Huron including Upper Michigan. He notes that at about 1500 the Potawatomi crossed into the northern part of the Lower Michigan peninsula driving the original tribes of the region—the Menominee and possibly the Cheyenne, Sutai, and Arapaho— south and west. The Menominee went south where they became tributary and allies of the Winnebago. The Cheyenne and Arapaho moved west until they reached the Great Plains.

The Winnebago were powerful enough to prevent the Ojibwe from moving further south, but territorial losses and population growth may have stressed available resources. The Winnebago may have tried to relieve this stress by moving into southern Wisconsin, but that created confrontations with the tribes of the Illinois Confederacy. With no place to expand, the Winnebago began to separate. Sometime around 1570, the Iowa, Missouri, and Otoe left the Winnebago near Green Bay and moved west. Passing down the Wisconsin River, they crossed the Mississippi and settled in Iowa before separating into individual tribes. This departure weakened the remaining Winnebago who concentrated into large villages near Green Bay to protect their territory from the Ojibwe on the north and Illinois to the south.

At this time, the Winnebago felt the first effects of Europeans in North America. Expansion of the French fur trade along the St. Lawrence River occurred after 1603. For the most part, the French stopped at the Huron villages on the south end of Lake Huron and allowed native traders to conduct the fur trade beyond that point. The Ottawa and Huron soon linked with the Ojibwe in upper Michigan and then made attempts to open trade with the Winnebago to the south. The French first learned about the Winnebago from the Ottawa around 1620. Knowing that the Ottawa were closely related to and trading with their Ojibwe enemies, the Winnebago were suspicious and refused to allow Ottawa and Huron traders to proceed further west. In 1634 the French sent Jean Nicolet west to the Winnebago. When Nicolet landed at Red Banks on the south shore of Green Bay, he was the first European the Winnebago had ever seen and word spread quickly among them with 5,000 men meeting him on the shores of Lake Winnebago. At the time, Smith (1996:6) estimates their numbers to be about 20,000 individuals (25,000 if the Iowa, Otoe and Missouri are added, as well as 30,000 Santees). However, in 1635, smallpox hit the Winnebagos reducing their numbers to 16,000.

Nicolet ultimately succeeded in arranging a truce between the Winnebago, Huron, and Ottawa which allowed trade. The fragile arrangement lasted for some time afterwards allowing Nicolet to make a second visit to the Winnebago villages at La Baye (Green Bay) in 1639. Twenty-six years would pass before another Frenchman would visit Green Bay. The Winnebago were almost destroyed during the interim.

In 1638, the Ottawas, Potawatomis, Kickapoos, Sacs, and Foxes united against the Winnebagoes. The Beaver Wars in the east put pressure on the western tribes. The first refugees from these wars to arrive in Wisconsin were a group of Potawatomi who attempted to settle near Green Bay in 1641. Showing no mercy, the Winnebago immediately attacked and by 1642 had

driven them north into upper Michigan. Unfortunately, this was only the beginning. The remaining Potawatomi soon joined the early arrivals followed by other tribes from lower Michigan. As all of these refugee tribes united against them, disagreements arose among the Winnebago over how to deal with the situation resulting in fighting among themselves, and Smith (1996:7) suggests that this may be the time that the Otoes, Iowas, and Missouris departed.

In the end most Winnebago decided on war and to concentrate on the Fox. Disaster was immediate. Crossing Lake Winnebago in canoes to attack the Fox, the Winnebago were caught in a storm and 500 warriors drowned. In 1638, the three largest Winnebago bands congregated in a single village, a traditional defensive measure in times of war, but it proved to be a death trap. The estimated 12,000 people in a confined space provided perfect conditions for a devastating smallpox epidemic.

The Winnebago emerged from this with fewer than 6,000 people, 1,500 of them warriors. They were also starving because war and epidemic had made it impossible to harvest their crops. Perhaps motivated by a need to form an alliance against the newcomers who were also overrunning their territory, or even pity for an old enemy, the Illinois sent 500 warriors and food to help the Winnebago. The Winnebago welcomed and held a feast for them, but in the midst of the dancing and celebration, fell upon their benefactors and killed all of them to appease the spirits of Winnebago warriors killed earlier by the Illinois.

It took the Illinois some time to learn what had happened. In the meantime, the Winnebago had anticipated retaliation and retreated to an island, probably Doty Island, in a lake where they built a fort. A year later, a large Illinois war party attacked the village only to find the Winnebago were absent on their winter hunt. After a six-day pursuit, they caught up with the Winnebago and nearly annihilated them. Some Winnebago escaped to find refuge with the Menominee. About 150 Winnebago prisoners were taken back as slaves to the Illinois villages and, after several years, were released to return to Wisconsin. Fewer than 500 (Smith 1996:9 estimates 150) Winnebago survived.

The Beaver Wars in the east caused substantial movement of population. Nearly 20,000 Algonquian refugees fled west to Wisconsin, and the decimated Menominee and Winnebago could not resist. The Winnebago made only one attempt at resistance during this period when they managed to keep the Mascouten from locating near Green Bay in 1655. However, this success proved temporary and made the Winnebago hated by the refugees. Within three years the Mascouten had allied with the Kickapoo and Miami and settled into the area.

Meanwhile, the French resumed travel to the western Great Lakes. In 1665 (Smith 1996:18 says 1668) fur trader Nicholas Perrot, Jesuit Claude-Jean Allouez, and four other Frenchmen accompanied a large Huron-Ottawa trading party on its return journey. Upon reaching Green Bay, Allouez mentioned that only 500 remained of Winnebago described by Nicolet.

Although the French fur trade had been at the root of the Beaver Wars which almost destroyed the Winnebago, it also saved them from extinction. As peace was restored, the Winnebago accepted the Algonquin refugees in Wisconsin and began to intermarry with them adapting parts of their culture in the process. In 1687 they joined a victorious French expedition against the Mohawks and Senecas (King William's War). Still recovering their population, Winnebago participation in this victory was minimal but the benefits enormous. Refugees began leaving Wisconsin for new homes to the south and east. This relieved the overcrowding and competition for resources, and after 60 years, the Winnebago regained most of their homeland. In 1697, the Winnebagos joined the Sacs, Foxes, and Potawatomis against the Santee Sioux in western Wisconsin.

Following confrontations with neighboring tribes, the Fox, Kickapoo, and Mascouten attacked the French at Fort Pontchartrain. In midst of the siege, Ottawa, Huron, and Potawatomi warriors

arrived to save the French and killed most of the Fox. The survivors retreated west to southern Wisconsin from where they continued to war on the French and their allies. Although the Winnebago had helped the Fox drive the Kaskaskia (part of the Illinois) from southern Wisconsin in 1700, they had never left Wisconsin. When the war between the French and Fox moved west, the Winnebago remained neutral.

Fighting between the Fox and Peoria (Illinois) continued after the Peoria refused to return Fox prisoners captured at Detroit in 1712. French attempts to mediate failed, and the war spread as the Mascouten and Kickapoo joined the Fox against the Peoria. By 1724 the Fox had added the Winnebago and Dakota to their side, and the French began to suspect the Fox were forming an alliance against them. The French decided to intervene in 1726 and took the precaution of isolating the Fox from their allies, the Dakota and Winnebago.

With the outbreak of the Second Fox War (1728–37), the Winnebago switched sides to the French. During the winter of 1729, a combined Winnebago, Menominee, Ojibwe war party attacked a Fox hunting party killing at least eighty warriors and capturing seventy women and children. Concerned about Fox retaliation, the Winnebago moved near Green Bay and built a fort on an island in the Fox River. The Fox found them and laid siege.

The Fox eventually abandoned the siege, after which the Winnebago made amends with the Menominee who had earlier been their allies. The war continued during which the Mascouten and Kickapoo ended their alliance with the Fox after a fatal argument over French prisoners. Without allies, the Fox decided in 1730 to leave Wisconsin and flee east to the Seneca. Caught in the open in northern Illinois, they were almost annihilated by the French and their allies. The few remaining Fox found refuge with the Sauk, but the French were determined to finish the Fox and dispatched an expedition in 1734 to demand the Sauk surrender the Fox. This was refused, and in the battle which followed, the French commander was killed. In the confusion, the Sauk and Fox escaped and fled west of the Mississippi into Iowa. Another French expedition against them failed in 1736, and at a conference held in Montreal during the spring of 1737, the Winnebago and Menominee asked the French to show mercy to the Fox while the Potawatomi and Ottawa made the same request on behalf of the Sauk.

The French reluctantly agreed and made peace. The departure of the Fox and Sauk from Wisconsin provided the Winnebago an opportunity to expand their range to the south and west. Although some Winnebago remained in the vicinity of Green Bay after 1741, most moved their villages inland. Since the animal populations near Green Bay had never recovered from the stress placed on them by the refugees during the 1600s, the Winnebago had been forced to make longer and longer trips inland to feed themselves and find the furs they needed for trade with the French. Although the Dakota and Ojibwe were at war with each other over hunting territory in western Wisconsin, neither objected to Winnebago hunters in the area. The Menominee enjoyed the same immunity, but in their case, the Fox and Sauk were a serious threat. The Winnebago were able to establish a friendly relationship with the Fox and Sauk after 1737, but the Menominee could not.

Little fighting occurred in the western Great Lakes during the King George's War (1744–48), but Winnebago warriors traveled east to Montreal with the Ottawa, Menominee, Saulteux and Mississauga Ojibwe, Illinois, Potawatomi, and Huron to defend Quebec from the British who cut the supply of French trade goods. The French quickly lost control of their allies in the Great Lakes. In 1746 while the Winnebago and Menominee were fighting the Missouri west of the Mississippi, Algonquian groups pushed the Illinois from southern Wisconsin and northern Illinois.

With the start of the French and Indian War (1755–63), the Winnebago once again went east to fight for the French. Many of the Great Lakes warriors contracted smallpox at Fort William Henry and brought it back with them to their villages that winter. Smallpox swept through the

Great Lakes and Ohio Valley taking most of the western tribes out of the war. After the capture of Quebec by the British in September, 1759, France had lost the war in North America, and British soldiers occupied Green Bay in 1761.

The breakdown of French authority in the region had brought the Menominee, Potawatomi, and Winnebago at Green Bay to the verge of war with the Michilimackinac Ojibwe in 1761, but the British assumed the old French role of mediator and provider of trade goods. In preventing the outbreak of serious warfare, the British won the trust and loyalty of the Winnebago and Menominee. With the start of the Pontiac Rebellion in 1763, the Winnebago (also the Menominee, Sauk, Fox, Iowa, and Arbre Croche Ottawa) sent wampum belts to the British as a token of their loyalty. Pontiac's revolt quickly collapsed. Almost all of tribes of the old French alliance united in a war against the Illinois and almost exterminated them. After a long wait, the Winnebago finally had their revenge against the Illinois. The victors then occupied much of the Illinois territory—the Winnebagos' share was a portion of northwest Illinois valued because of its lead deposits.

During the next 50 years, the Winnebago would ally with the British by fighting both the Spanish and Americans during the Revolutionary War (1775–83) and the Americans during the War of 1812 (1812–14). Early fighting in the west during the Revolutionary War was mostly confined to Ohio and Kentucky and did not involve the Winnebago. This allowed the Winnebago (also Fox, Sauk, Potawatomi, Dakota, and Menominee) in 1780 to join an unsuccessful British effort to capture St. Louis from the Spanish (Spain had joined the war against Britain) and retake Illinois from the Americans. The Revolutionary War "officially" ended in 1783 with the Treaty of Paris, but in the Ohio Valley, the British continued to occupy Detroit and their other forts on American territory until the United States paid its treaty obligations to British loyalists.

In the meantime, the British encouraged the formation of a western alliance to keep the Americans out of Ohio. They succeeded until the Battle of Fallen Timbers in 1794. The Winnebago in Wisconsin were too far away to participate in this effort, but the British dominated the tribes and trade of the Upper Great Lakes until the 1830s. Intertribal warfare during the 1770s and 1780s had hindered the fur trade, and at the request of Montreal fur traders, the British met with the tribes of the upper Great Lakes at Michilimackinac in October, 1786. The treaty signed there produced 20 years of peace with the exception of the war between the Dakota and Ojibwe which continued until the 1850s. This, however, was not a problem for the Winnebago who were friendly with both parties and free to hunt in the war zone between them. They also maintained a friendship with the Fox and Sauk living along the Mississippi in eastern Iowa and western Illinois, and it can be said that during this period the Winnebago lived in peace with very few enemies.

The Winnebago homeland shifted from being at the edge to the center of American territory after the United States' purchase of the Louisiana Territory from France in 1803. Before this, the Winnebago had known the Americans as a distant enemy. Aside from their foray into the Illinois country with the British in 1780, the Winnebago had never dealt directly with Americans. When Zebulon Pike explored the upper Mississippi in 1805, meeting with the Winnebago near Prairie du Chien was peaceful, but this soon changed. In 1804 William Henry Harrison convinced the Fox and Sauk to cede their tribe's lands east of the Mississippi. Fort Madison, the first American fort on the upper Mississippi, was built in southeast Iowa in 1809 and garrisoned with 50 soldiers.

The Fox and Sauk refused to acknowledge the 1804 treaty and instantly became hostile to the Americans. The Winnebago were also concerned because of the lead deposits in their lands in northwest Illinois. The threat of American takeover was no longer a distant threat in Ohio, and the Winnebago listened with great interest in 1809 to the religion of Tenskwatawa, the Shawnee Prophet, and the call for unity and no further land cessions by his brother Tecumseh. Within a

short time, the Winnebago were one of the most militant members of Tecumseh's alliance against the Americans.

The Winnebago began making regular visits to Prophetstown (Tippecanoe) in Indiana during 1810 and even established a permanent village (Village du Puant) nearby. Tecumseh went south in the fall of 1811 to enlist the southern tribes against the Americans. During his absence, the Potawatomi attacked American settlements in Illinois starting a frontier war. William Henry Harrison, the governor of the Indiana Territory, organized an army and in November marched on Prophetstown. The Winnebago lost heavily at the Battle of Tippecanoe, but the military defeat was not nearly as important as the damage done to Tenskwatawa's reputation as a prophet. Angry Winnebago warriors held him prisoner for two weeks and almost killed him. When Tecumseh returned in January, 1812, his alliance was in shambles, but he was able to rebuild and soon regained the allegiance of the Winnebago. With the outbreak of the War of 1812 (1812–14) in June, the Winnebago threw their support to Tecumseh and the British.

With the Fox, Sauk, and Potawatomi, the Winnebago besieged Fort Madison and forced its abandonment in 1813. Winnebago warriors also fought as part of Tecumseh's forces at Maumee Rapids and River Raisin in Ohio and Michigan. After Tecumseh was killed at the Battle of the Thames (October, 1813), the Winnebago joined 500 warriors from the upper Great Lakes to help the British defeat the American attempt to retake Fort Michilimackinac in August, 1814. The War of 1812 ended in a stalemate between the British and Americans, but for the tribes of the Great Lakes and Ohio Valley it was total defeat. The Winnebago made peace with the Americans at St. Louis in June, 1816. Their first treaty with the United States did not involve land cessions and called upon both sides to forgive and forget injuries suffered during the war. The Winnebago kept their part of the agreement but remained hostile. They allowed Americans to travel through their territory from the Mississippi to the Fox portage, but charged tolls.

After the War of 1812, American settlement began to advance up the Mississippi from St. Louis, but warfare in Iowa and Minnesota between the Dakota, Ojibwe, Fox, and Sauk slowed its progress. By 1821, the Winnebago began to see the future for their lands when the Oneida asked the Menominee for permission to relocate to lands along the lower Fox River, lands the Menominee respected and recognized as ancient Winnebago lands. Invited to participate in negotiations, the Winnebago refused. The government regularized the intertribal agreement, obtaining further cessions in a series of Menominee treaties that gave no consideration to Winnebago claims (Lurie 1978:697). In 1836, the Menominee ceded large portions of land including the northern end of Lake Winnebago where there had long been Winnebago villages. The government in 1825 attempted to end the fighting at a huge intertribal council held with the area's tribes at Prairie du Chien. Attended by the Ojibwe, Fox, Sauk, Menominee, Iowa, Sioux, Winnebago, Ottawa, and Potawatomi, the resulting treaty attempted to end intertribal warfare by establishing boundaries between them. It also created a 40-mile wide buffer zone between the Dakota and the Fox and Sauk in northeast Iowa. Called the Neutral Ground, the Americans hoped to relocate the Winnebago there since they were friendly with both sides, but the Winnebago did not share the Americans' optimism for this arrangement. Since its purpose was to facilitate settlement, the treaty made almost no provision to protect native lands from white encroachment. It had only limited success in preventing warfare, but American settlement afterward moved north at an accelerated pace.

During the next 15 years the Winnebago would be forced to surrender most of their homeland. The first target was the lead deposits in northwest Illinois, and in what can be described as the first (and last) "lead rush," Americans rushed in to stake their claims. Government agents described these people as "lawless" but did nothing to prevent encroachment. Less than two years after the Treaty of Prairie du Chien, the Winnebago were forced into war to defend their lands.

The resistance, known as the Winnebago War (1827), was led by the Winnebago Prophet White Cloud and the war chief Red Bird. Fighting began in the summer of 1827 when a barge ascending the Mississippi near Prairie du Chien was fired upon. Other attacks killed some settlers along the lower Wisconsin River and struck the lead mines near Galena, Illinois. Soldiers were rushed north from Jefferson Barracks at St. Louis, and by August it was over. Meanwhile, in a treaty signed at Green Bay in August, 1828, the Winnebago (also Ojibwe, Potawatomi, and Ottawa) ceded northern Illinois for $540,000.

With the lead mining district secured, the next victims were the Fox and Sauk in western Illinois. As a condition of peace in 1816, the United States had finally gotten their reluctant acceptance of that dubious treaty signed at St. Louis in 1804 ceding all of their lands east of the Mississippi. The bait was that the Fox and Sauk could stay until the Americans needed the land. Most likely neither the Fox, Sauk, nor the American representatives realized how soon this would be. Illinois became a state in 1818 and within ten years was pressing for removal. Blackhawk's Sauk at Rock Island refused to move, but after the Menominee and Dakota murdered fifteen Fox chiefs enroute to a meeting with the Americans at Prairie du Chien, war seemed imminent. Blackhawk brought his people west into Iowa to protect the Fox and Sauk villages there from Dakota attacks which never came. When he started back to Illinois, the Americans refused to allow him to re-cross the Mississippi.

In his anger, he listened to arguments from his friend Neapope and the Winnebago Prophet (White Cloud) convincing him the British and other tribes were ready to join him against the Americans. In the spring he defiantly crossed the river into Illinois touching off the Blackhawk War (1832). The help did not materialize. Only a few Potawatomi and White Cloud's small following among the Winnebago joined the revolt. Pursued by the army and Illinois militia, Blackhawk retreated toward Wisconsin hoping to reach safety with either the Winnebago or Ojibwe. Most Winnebago wanted nothing to do with him and refused to help. Finally realizing this, Blackhawk turned west to try to return to Iowa. He never made it. Many of the Sauk were slaughtered by the Army before surrendering, and Menominee and Dakota warriors killed many of those who managed to elude the Americans.

Blackhawk escaped before the battle and fled north. He was captured by the Winnebago of Chief Spoon Decorah (Choukeka), a friend of the Americans, who delivered him to the Indian Agent at Prairie du Chien. Despite this, the general feeling among the Americans was that the Winnebago had cooperated with Blackhawk. By the harsh terms of the treaty negotiated by General Winfield Scott at Fort Armstrong in September, 1832, the Winnebago ceded their lands east of the Mississippi and agreed to move to the Neutral Ground in northeast Iowa. They were to receive $270,000 ($10,000/year for 27 years) and were required to surrender several of their tribesmen accused of murdering whites during the war. White settlement moved into southern Wisconsin afterwards, but the Winnebago remained in their old lands, primarily because of hostility from the Fox and Sauk for the Winnebagos' failure to help them during the Blackhawk War.

One out of four Winnebago died during a smallpox epidemic in 1836, soon causing them to leave Wisconsin. A second treaty signed at Washington, D.C. in 1837 confirmed the Winnebago cession of Wisconsin and reduced the size of the Neutral Ground, but the Winnebago did not leave until 1840 when General Henry Atkinson refused to make their annuities except at the Turkey River Subagency in northeast Iowa. By 1842 approximately 2,200 Winnebago had settled in villages near the agency, which was guarded by cavalry stationed nearby at Fort Atkinson, a necessary precaution since the threat of attack by the Fox and Sauk was very real. During the winter of 1839, they had killed 40 members of a Winnebago hunting party west of the Wapsipinicon River. The following year, Fox and Sauk decided to attack the Winnebago villages

near the agency but were prevented by a unusually heavy snowfall that winter. Meanwhile, more than 1,000 Winnebago had remained in their homeland giving Fort Atkinson's cavalry the added problem of keeping the Iowa Winnebago from going back to Wisconsin.

With Iowa statehood in 1846, the Winnebago moved again. In an 1845 treaty, the Winnebago exchanged their Iowa lands for the 800,000 acre Long Prairie (Crow Wing River) reserve in Minnesota and $190,000. The move ended the threat of the Fox and Sauk, but placed the Winnebago as a buffer between the Dakota and Ojibwe. Some Winnebago managed to remain in northeast Iowa for more than a century, but the main group was moved during 1848 and 1849. The new location was unsatisfactory from the beginning. Not only was there poor soil and a short growing season, but the Ojibwe used the agency as a way-station to attack the Dakota. In a treaty signed in 1856, the government allowed the Winnebago to exchange the Long Prairie reserve for another farther south in Minnesota at Blue Earth. As their population declined, the Winnebago surrendered a part of this in 1859 as excess lands.

All went well until the Dakota uprising erupted in the Minnesota River Valley during 1862 killing over 400 whites. The Winnebago had no part in this, but in the aftermath, Minnesota was no longer safe. The Winnebago were forcibly gathered together and deported by steamboat down the Mississippi and then up the Missouri to the Crow Creek reservation in South Dakota with the Yankton (Sioux). Some got to leave the steamboat at Hannibal, Missouri and travel by train to St. Joseph where they were put back on a boat for the rest of their journey up the Missouri. Conditions were terrible at the South Dakota reservation. Many Winnebago slipped away to return to Minnesota and Wisconsin. Finally, the remaining 1,200 left as a group and fled down the Missouri to ask the Omaha in eastern Nebraska for a refuge.

The government finally accepted their self-relocation and in 1865 purchased 40,000 acres from the Omaha to provide the Winnebago with their own reservation. Life in Nebraska was far from easy. Exposed to Lakota (Sioux) raids, many of the Nebraska Winnebago volunteered as army scouts against Lakota during 1868. While Winnebago were serving as scouts, the Indian Bureau conceived a plan of relocating the Winnebago to North Dakota as a buffer between the Lakota and the Mandan, Hidatsa, and Arikara. The Winnebago declined. Meanwhile, the Winnebago in Wisconsin were routinely being arrested and sent to Nebraska. Within a month, they were usually back in Wisconsin. After ten years of this, the government gave up after 1875, purchased homestead lands for the Winnebago, and let them stay in Wisconsin. During the 1880s, over half of the Nebraska Winnebago went home to Wisconsin where they have remained ever since, scattered across ten counties. The other Winnebago remained in Nebraska although one-third of their original 40,000-acre reservation was eventually lost to whites through allotment after 1887.

David Smith (1996:64–87) provides a summary of the history and accomplishments of the Winnebago of Nebraska after the turn of the century from the Reservation Period into the late 20th century. Likewise, Nancy Lurie (1978:702–705) and the Ho-Chunk Nation (2000) web site provide coverage of the same time period for the Ho-Chunk Nation of Wisconsin.

IOWA (IOWAY) AND OTOE (OTO)-MISSOURIA (MISSOURI)

The Iowa, Oto, and Missouri nations are so closely integrated that separating them out is difficult until well into the Historic period. Although the Iowa are better known ethnographically and historically, examination of the culture history of these three groups demonstrates an extreme "fluidity" of kinship and "tribal" identity, even in the early 20th century. Even today, ties are very close.

The Ioway or Iowa Nation is made up of two federally-recognized Indian tribes, the Iowa Tribe of Kansas and Nebraska, and the Iowa Tribe of Oklahoma. Mildred Wedel (1978) has

looked in depth at the origin of the tribal name and its variations among a range of tribes and early European explorers in the region. As Foster (1999) relates, both spellings, Iowa and Ioway, are used interchangeably by tribal members. The name "Iowa," sometimes spelled and pronounced "Ioway," is mysterious in its origins. Foster says:

> Most agree that it means "the Sleepy Ones," a name given to them as a jest by their linguistic kin the Dakota (Sioux). The Iowa call themselves *Baxoje* in their own language. The name comes from an incident long, long ago when they separated from their close brothers the Otoe. The Iowa, Otoe, and Missouri (and some add others) were camping together by a river during one of their migrations. Some say a gust of wind blew a cloud of sand and campfire ashes onto the Iowa camp. From that time on they were called *Baxoje,* meaning "Grey Heads" or "Ashy Heads" or "Grey Snow" and other similar translations. *Ba* (depending on how you pronounce it) may mean "snow" or "head", and *Xoje* can mean "ash" or "grey."

Two scholars have written extensively on the culture history of the Iowa: Mildred Mott Wedel's articles cover the early historic period in detail, and Martha Royce Blaine's book (1979, 1995) addresses the 19th and 20th centuries. Mildred Mott Wedel first identified the connection of the Iowa to the Oneota archaeological complex in northeastern Iowa (Mott 1938; Wedel 1959) and wrote in detail about early French accounts of their movements (Wedel 1976, 1981, 1986, 1988).

Many Iowa say that they have always lived in the area, or that, according to tribal tradition, they lived in Iowa by AD 1000, when the Ioway, the Otoe, and the Missouri were one people,. Their ancestral sites are grouped together as belonging to the Oneota culture (A.D. 1100–1700). The Ioway also were closely related to the Ho-Chunk, to whom the Iowa refer as "father," whose origins are seen in the Oneota sites of Wisconsin, and the Oto, to whom they refer as "brother."

The Iowa trace their roots to a place called Moka-Shutze (Mashuje), the Red Earth, which as Skinner (1925; 1926) notes, is possibly a reference to a spot along Lake Michigan or Red Banks on Green Bay in Wisconsin. Hall (1993:65) mentions a mythical homeland shared with the Winnebago north of Lake Superior. According to their own traditions (Skinner 1926), each of the seven original Iowa clans was founded by four animal brothers who became human. The Ioway ranged widely throughout Iowa, and even beyond its present-day borders into the states of Minnesota, Wisconsin, Illinois, South Dakota, Nebraska, Kansas, and Missouri. Their most important villages were located along Iowa's major river systems: the Mississippi, the Upper Iowa River, the Iowa River, the Missouri, the Big Sioux, the Grand River, and the Des Moines River, as well as Okoboji-Spirit Lakes.

Perrot first mentions the Iowa in 1656, but the French probably did not meet the Iowa until 1676 when the Jesuit Louis Andre met them trading at Green Bay (Alex 2000:216). By the time they emerge into the Historic period, the Iowa had shifted to the west, likely to hunt in the lake country of southern Minnesota and north-central Iowa, areas they shared at times with the Oto and Winnebago. As Alex (2000:217) discusses, the similarity of the material culture of the Iowa, Oto, and Winnebago makes it virtually impossible to distinguish their individual sites. By the late 1600s, the villages on the Upper Iowa River had been abandoned in favor of northwest Iowa and southern Minnesota. With pressure from Algonquian groups, the Iowa had fled westward to be near their relatives and allies, the Oto and Omaha, possibly along the Little and Big Sioux and Missouri Rivers.

Sustained contact began after 1685 when the Iowa were first met by the French in what is now northeast Iowa or the Blue Earth country of southern Minnesota (Wedel 1981; Foster 1999).

Pressed westward by more numerous tribes like the Sauk, Meskwaki (Fox), and Sioux, the Iowa would remain a little-known people. By the time American explorers and settlers began moving into Iowa, the Iowa lived in lands deep within Iowa, usually relinquishing Mississippi shorelines to their guests and allies, the Sauk and Meskwaki.

Oral tradition and French documents both establish the presence of the Iowa in the Upper Iowa region at the time of first European contact. The Iowa petition to Congress and President Jackson in 1836 referred to ancestral burial sites and villages in northeast Iowa (Blaine 1979:164). A map presented in 1837 by the Iowa chief Notchininga, or No Heart (No Heart of Fear), to a council in Washington, D. C. also supported Ioway claims to Iowa territory (Green 1995).

Foster (1996) examines the movements of the Iowa across the landscape and their perceptions of it. He also discusses the Iowa from 1685 to 1837 at some length:

> The Oneota ancestors of the Ioway-Oto were the first to locate and use the red pipestone from the Pipestone quarries. In those days, the quarries were sacred to all tribes and considered neutral ground where all could go. In those days, the quarries were in the middle of Ioway-Oto territory, and the Ioway-Oto were only the caretakers of the place, not the owners. Before the 1700s, the Ioway remained at peace with their neighbors, the Algonquian-speakers like the Sauk and Meskwaki and their Siouan-speaking relatives the Sioux (Dakota and Nakota). In the late 1600s and early 1700s, desperate intertribal wars would force the Ioway-Oto from the area, and the Yankton Nakota would claim the area as their own.

> The Ioway started out as allies of their northern relatives the Sioux (Dakota and Nakota). In the 1730s, they welcomed the Sauk and Fox into Iowa as a refuge from the aggression of the French. Depletion of game and intrigue by trading companies caused disasterous intertribal wars in Iowa in the 1700s and early 1800s. These terrible events decimated the small Ioway tribe, along with disease.

> The Ioway were now forced to contend with the more numerous and better-armed Sioux and Sauk and Fox, who had taken over Ioway ancestral lands in Iowa and southern Minnesota. The Ioway were forced to give up claim to their lands in a long series of treaties that favored the stronger tribes, from 1804-1838. Through the Treaty of 1836, the Iowa were moved from their homelands by the U.S. government onto a new reservation on the Nemaha River in the state of Kansas. The last Ioway to resist removal across the Missouri to Kansas was Big Neck, whose small band fought to remain in Iowa until Big Neck was killed by the Yanktons in 1838. [Foster 1999]

Later Iowa history is also discussed by Foster (1999). In 1837, the Iowa settled in northeast Kansas near their old allies the Sac and Fox. The years 1837–1861 were terrible years for the Iowa. Missionaries attacked much of the traditional religion and culture. More treaties were made into the 1860s that finalized their land loss. In 1861, many Iowa men joined the Union Army to fight in the Civil War. When they returned, they brought new ideas back home. Some recognized that their old way of life was doomed, so they decided that to survive they had to learn to live the white man's way. This meant dividing up communal tribal lands into smaller parcels of individually-owned land. In the 1880s other Iowas decided that they would move to Indian Territory (which would become Oklahoma), and live their traditional village lifestyle there. However, the Allotment Act of 1890 forced the Oklahoma Iowa to divide their lands as well.

Two federally recognized groups of Iowas exist today, the Iowa Tribe of Kansas-Nebraska, near White Cloud, Kansas, and the Iowa Tribe of Oklahoma, near Perkins, Oklahoma.

The Oto and Missouri shared similar cultural patterns with the Iowa and, as noted above, are archaeologically difficult to tell from the Iowa and Ho-Chunk. Many authors note that the Missouri, Oto, and Iowa visited each other often, and sometimes lived with the other, with the Iowa calling them "brother."

Chapman (1965:xi) suggests that the Oto were on the Upper Iowa and the Blue Earth Rivers at 1680 based on French accounts, but by 1700 they had crossed the Missouri River and by 1717 had no documented permanent village east of the Missouri River. The Oto and Missouri had a falling out, traditionally attributed to a love affair between the two chiefs' children, so the Oto split off, moving to the west of the Missouri River. From 1717 until 1854 they lived along the Platte River in Nebraska including near its confluence with the Missouri River. In 1829, the Oto completely absorbed the Missouri after the latter had been decimated by smallpox. Their focus was in the area of southwestern Iowa, and in the August 19th treaty at Prairie du Chien, they contended they had just claim to the area southwest of the Des Moines River.

By treaties in the 1830s and 1854, the Otoe-Missouri ceded all land and moved to a 162,000 acre reservation on the Kansas-Nebraska border along the Big Blue River. In 1880, two factions developed over acculturation. The Coyote, or traditional faction, moved to Indian Territory. The other group, the Quakers, ceded their land for a 129,000 acre reservation near Red Rock in north central Oklahoma. Most Coyotes joined them in 1890 having lived for a time in a separate village on the Iowa Reservation. Their reservation was allotted in 1907.

OMAHA AND PONCA

The Omaha and Ponca tribes never lived in the study region but are considered here because their stories generally speak of an origin shared with the other Siouan groups in which they left the Wabash and Ohio River regions perhaps sometime in the early 16th century (Dorsey 1884:212). After they reached the Mississippi, they split into five separate Dhegiha Siouan speaking tribes. The initial exodus was prompted in part by pressure from the Iroquois. Those who continued north along the Mississippi became known as Osage, Kaw, Ponca, and Omaha; the people who headed south were known as Quapaw. It is indeed difficult to separate the Ponca out from the Omaha until later.

O'Shea and Ludwickson (1992:16) summarize the difficulty of tracing a more precise origin well. They note that connections between the Dhegiha language speakers and the lower Ohio River area Mississippian sites are far from certain. They conclude that the Omaha are difficult to detect archaeologically until late in the 18th Century and that documentary descriptions precede any authenticated Omaha archaeological site with the crucial sources those of oral traditions recorded by several scholars including Dorsey (1984), Fontenelle (1885), and Fletcher and La Flesche (1911). They note that the Omaha are only dectable archaeologically in the late 18th Century with much of the uncertainty due to Omaha adoption of many material culture and settlement traits of the Caddoan speakers in the area and the rapid influx of European trade goods (O'Shea and Ludwickson 1992:17).

The Omaha appear in European documents in the 1670s in depictions on maps of present-day southwest Minnesota and northwest Iowa. The Omaha and Ponca, accompanied by the Skidi Pawnee, followed the Des Moines River to its headwaters and then traveled overland toward the Minnesota catlinite (pipestone) quarries, where they lived until the early to mid-17th century. The Omaha also appear with the Iowa along the Big Sioux River, depicted on Guillaume Delisle's 1702 map as the *R. des Maha*. One of the two possible villages may have been the Blood Run

site. Then, driven west by the Dakota, they moved to near Lake Andes, South Dakota, where the Omaha and Ponca briefly separated. O'Shea and Ludwickson (1992:17) suggest that by 1714 they were living along the White River in South Dakota, in close contact with the Arikara from whom they adopted many Plains traits, even though there was reportedly some warfare between the groups. With poor maize harvests, the Omaha abandoned the White and moved further down the Missouri River.

Reunited with the Ponca, the two tribes traveled south along the Missouri to Nebraska, where they separated once again, probably along the Niobrara River, in the late 17th century. When they reached the Missouri, frictions between formerly independent segments developed with rival leaders establishing their own villages. The Ponca tribe probably developed out of such a split, although it is not recounted in oral traditions, sometime after 1714 since Burgmount mentions no such people (O'Shea and Ludwickson 1992:20). Omaha tradition suggests that while at the village on the White River, the Poncas split off, visiting the Black Hills, but rejoined the Omaha. They then split permanently, moving onto the Niobrara River. The Ponca may have originated from an Omaha clan because the other Dhegihan tribes have a Ponca clan, but the Omaha do not. Between 1700 and 1758 the Omaha population dropped from a reported 1,000 to 800 men, about the number attributed to the Ponca.

The Omaha moved eastward along the Missouri after the split, settling on Bow (then Village) Creek, in northeast Nebraska. After acquiring horses about 1730, the people began to assume many additional characteristics of typical Plains Indians.

During the 18th century, the Omaha visited French posts as far north as Lake Winnipeg. Well supplied with horses (from the Pawnee) and guns (from French traders), the Omaha were able to resist Dakota attacks, even acting as trade intermediaries with their enemies. In 1791–1792, the two warring groups signed a peace treaty.

By the early 19th century, heavy involvement in the non-native trade had altered Omaha material culture. A severe smallpox epidemic in 1802 reduced the population to around 300. In 1854 they were forced to cede their land and, the following year, to take up residence on a reservation. In 1865 the government created the Winnebago Reservation from the northern Omaha Reservation. In 1882 the reservation was allotted.

By 1900 most Omahas knew English, and many spoke it well. All lived in houses, and nearly all wore nontraditional clothing. Most children attended school, and a significant number of adults were succeeding as farmers or in other occupations in the nontraditional economy. Still, throughout the twentieth century, the Omaha fought further encroachments on the reservation and tribal sovereignty.

The Ponca had been reduced in population by over 90 percent by the time of the Lewis and Clark expedition met them in 1804. They were generally friendly to the Americans and became involved in trade. Treaties starting in 1817 cost them more than two million acres of land. By 1858, they accepted a reservation of about 100,000 acres and promised protection from the Lakota. Ten years later in 1868 in the Ft. Laramie Treaty, the Lakota successfully claimed the land. Uncontrolled by treaty, Lakota attacks got worse, so the U.S. government, in spite of treaties, moved the Ponca to Indian Territory in Oklahoma. On a reservation of about 100,00 acres on the Arkansas and Salt Rivers, nearly a quarter of the people died of starvation and disease.

In 1877, Chief Standing Bear began a 500-mile walk back to the Niobrara to bury their dead. After being arrested and detained, a precedent-setting legal case established their rights to both legal standing and to their Nebraska land to which they quickly returned. The government would not let those still in Indian Territory leave, causing a split in the tribe that exists today. In the 1950s the Northern Ponca were formally terminated and over 400 Poncas had lost all of their

remaining land. Since 1990, the Northern Ponca have reacquired more than 400 acres of their former reservation and are adding to the land base. They regained federal recognition as the Ponca Tribe of Nebraska in 1990. The Southern Ponca are located in north-central Oklahoma.

SAUK (SAC) AND FOX (MESQUAKIE OR MESKWAKI)

The Fox and the Sauk are two separate but closely related tribes whose oral histories tell of an earlier time when they migrated from the Atlantic coast via the St. Lawrence River. They were not, by any accounts including their own, involved in construction or use of the Effigy Mound complex. Yet, they did occupy lands in which the mounds had been constructed and were heavily involved in interaction with most of the tribes of the region historically.

There are several excellent histories of the Sauk and Fox. Charles Callender (1978a; 1978b) provides solid histories of the groups as part of the Handbook of North American Indians Northeast volume. William Hagan (1958) provides a good general history and Edmunds and Peyser (1993) provide excellent coverage of the history of the Fox Wars. As with the Winnebago, the most recent history is provided by Sultzman (1999a). It is used as the base source but substantially condensed from the web version with only minor alterations, additions for expansion of issues related to Effigy Mounds, and changes for grammatical clarity. The condensation is substantially less than that of the Winnebago due to the fact that although the Sauk and Fox lived in the study region, they were only instruments of change for the resident tribes of the region. For a more detailed culture history, see Sultzman's complete document or the other sources mentioned above.

The Fox is the historical name for those who call themselves the Mesquakie (Meshkwahkihaki, Meskwaki, Meskwakihuk, Meskwakihugi) meaning "red earth people." Sultzman (1999a) discusses the usage of the names as follows:

> Early French explorers mistook a clan name (Wagosh meaning fox) for that of the entire tribe and began referring to them as the "Renard" (French for Fox), and the English and Americans continued the error in their own language. Other names were: Asakiwaki (Sauk), Outagamie or Odugameeg (Ojibwe "people of the other shore"), Beshdeke (Dakota), Skenchioe (Iroquois), Skaxshurunu (Wyandot), Skenchiohronon (Huron), Mshkwa'kitha (Shawnee), Squawkies (British), Tochewahcoo (Arikara), Wacereke (Winnebago), and Wakusheg (Potawatomi).

> Either Sac or Sauk is correct. Spelling variations of this are: Osawkee, Saki, Saque, and Sawkee. The name comes from their own language - Osakiwuk, or Asakiwaki, meaning "people of the outlet" and refers to their original homeland on Michigan's Saginaw Bay which gets its name from them - Saginaw meaning "place of the Sauk." Since the Fox were the "people of the red earth," Sauk has often been inappropriately rendered as meaning "people of the yellow earth." Alternate names for the Sauk were: Hotinestakon (Onondaga), Osaugee (Ojibwe), Quatokeronon (Huron), Satoeronnon (Huron), Zake (Dakota), and Zagi (Winnebago).

By 1600 they occupied the eastern half of lower Michigan with the Sauk living around Saginaw Bay, while the Fox lived immediately to the south and west. Driven from their homeland during the 1640s, the Fox resettled in central Wisconsin. The Sauk crossed over to the Upper Peninsula near the Mackinac Strait and moved into the headwaters of the Wisconsin River west of Green Bay. Except for the two years the Fox lived near Detroit (1710–12), neither tribe ever

returned to Michigan. They remained in Wisconsin until 1734, when both were driven across the Mississippi River into eastern Iowa by the French.

The Fox afterwards lived along the upper Mississippi in northeastern Iowa except for the period when they maintained some villages in western Wisconsin (1765–83). The Sauk were also located along the upper Mississippi after 1734 just south of the Fox but, being the more numerous of the two, occupied a larger area. Through wars with the Illinois Confederacy, Missouria, and Osage, the Sauk expanded southward. By 1800 they controlled the upper Mississippi between St. Louis and Dubuque, Iowa. These lands were ceded to the Americans beginning with a treaty signed in 1804. Internal disagreements over accepting this treaty caused one Sauk group to separate from the others and move south to the Missouri River. Known as the Missouri Band, they remained there until 1824 when they were removed to the northwest corner of Missouri. In 1836 they exchanged their last lands in Missouri for a reserve west of the Missouri River on the Kansas-Nebraska border. Despite allotment, the Sac and Fox of Missouri have retained a small reservation with their tribal headquarters located in Reserve, Kansas.

Pressures from settlement after 1825 forced the Sauk along the Mississippi to leave western Illinois and relocate to southeast Iowa. The exception was Blackhawk's Band at Rock Island (Illinois) which did not finally leave until after the Blackhawk War in 1832. As a consequence of the war, the Sauk were forced to surrender a large part of eastern Iowa. The Fox and Sauk remained in Iowa until 1842 when they ceded their lands for a reserve in Kansas just south of present-day Topeka. However, many of them refused to leave Iowa and kept the army very busy trying to find them. Once in Kansas, major disagreements developed between the Fox and the Sauk. Some of the Fox moved in with the Kickapoo and later left with them for northern Mexico. By 1859 most of the Fox had left Kansas and returned to Iowa where they purchased land near Tama.

The remaining Fox and Sauk sold their Kansas land and relocated to Oklahoma in 1869 where they were given a 750,000 acre reservation in Potawatomi, Lincoln, and Payne counties east of Oklahoma City. After allotment, most of this was released to whites in 1891. Currently, the Sac and Fox Nation of Oklahoma, headquartered in Stroud, has kept less than 1,000 acres. On the other hand, the Fox in Iowa have used their own money to purchase land, and their tribal holdings have grown to almost 5,000 acres. The only federally recognized tribe in Iowa, they prefer to be called the Mesquaki (now Meskwaki) Indian settlement, but because of treaties signed jointly with the Sauk, their official name is the Sac and Fox of the Mississippi in Iowa.

At the time of their first contact with the French in 1666, both the Fox and the Sauk were living in Wisconsin. The initial French estimates placed the Fox at 5,000 and the Sauk at 6,500. Because both tribes had just endured 30 years of war, relocation to Wisconsin, and numerous epidemics, it appears their original populations must have been at least twice this, approximately 10,000 for each tribe. By 1712 the Fox had dropped to about 3,500. They lost half of these in the First Fox War (1712–14). They began the Second Fox War in 1728 with about 1,500, only 500 of whom survived the attempt by the French to remove them from the face of the earth. The Sauk relations with the French were friendly until they protected the Fox in 1734, and they numbered close to 4,000 at this time. Later estimates are sometimes confused because the Fox and Sauk were treated as a merged tribe. Both tribes increased after 1737. Zebulon Pike in 1806 listed the Fox at 1,750 and the Sauk at 2,850. His estimate of the Sauk may actually have been too low. Government records in 1829 reported there were 5,000 Sauk, 1,600 Fox, and another 500 Sauk in Missouri.

After their removal from Iowa in 1846, the population of both tribes underwent a drastic decline. The Indian Bureau in 1845 stated 1,300 Fox and 2,500 Sauk had left Iowa, but only 700 Fox and 1,900 Sauk arrived in Kansas. The Missouri Band at this time numbered less than 200.

After a terrible smallpox epidemic, 300 Fox and 1,300 Sauk were all that remained on the Kansas reserve in 1852, but at least 300 Fox and an unknown number of Sauk were hiding in Iowa. Others were on the Kickapoo reserve or in places where no one could count them. Most of the Fox left shortly afterward and returned to Iowa. Following the Civil War, 600 Sauk and 100 Fox relocated to Oklahoma. Only the Missouri Band managed to stay in Kansas. The 1910 census listed 343 Fox in Iowa, 630 Sauk and Fox in Oklahoma, and 90 Sauk in Kansas. The current enrollments of the three federally recognized Sac and Fox tribes are: 1,100 Sac & Fox Tribe of the Mississippi in Iowa; 400 Sac & Fox Nation of Missouri (in Kansas and Nebraska); and 2,200 Sac & Fox Nation of Oklahoma.

The Fox and the Sauk were so closely associated that these two distinct tribes are usually considered to have been a single tribe. Although joined in very close alliance after 1734, the Fox and the Sauk maintained separate traditions and chiefs. This was very apparent when Fox and Sauk chiefs at the insistence of the United States were forced to sign the same treaty. However, the signatures always appear in two distinct groupings, one for the Fox and the other for the Sauk. Both tribes have been described as extremely individualistic and warlike, although the "warlike" might come as a surprise to the whites in Iowa who have lived in peace next to the Fox for the last 130 years. Both the Fox and the Sauk had a strong sense of tribal identity and were never reluctant to choose their own path. The French found both tribes independent and very difficult to "control."

The Sac and Fox Tribe of the Mississippi in Iowa today have prospered with recent development of a casino economy and are involved in the process of land buy-back and building tribal infrastructure. They have an active cultural preservation and repatriation program which coordinates closely with the interests of the Sauk and Fox who live in Kansas and Oklahoma through the Sac and Fox NAGPRA Confederacy.

EASTERN SIOUX OR DAKOTA

The Sioux are normally associated with the Lakota and are perhaps the most stereotyped people among American Indians. To most they are the horse-mounted, war-bonneted, bison-hunting warriors of the western great Plains. Few groups have also had as much written about them, but in truth, few know of the substantial diversity in the linguistic groups. The literature on the Eastern Sioux is smaller than that on the western groups, but in some ways they are no less well known to the public, largely due to the so-called Dakota or Sioux Uprising in 1862. They had close connections and major interaction with the other Siouan speakers in the Upper Great Lakes region.

Several good histories on the Eastern Sioux are available. Most notable are the initial chapters of Landes (1968) and Meyer (1967) for the issues of concern in this report. Pritzker (1998:452–455) provides the foundation from which this summary is derived, often directly and without further citation. Additions or clarifications are added as needed.

The divisions of the Eastern Siouan group include Sisseton ("swamp village," "lake village, or fishscale village"), Wahpeton ("dwellers among the leaves"), Wahpekute ("shooters among the leaves"), and Mdewakanton ("People of the Mystic Lake"). The latter two divisions are also known as Santee (from Isanati, "knife.") and shared a closely related culture. The Dakota refer to themselves as Dakota ("ally"), *Dakotah Oyate* ("Dakota People"), or *Ikce Wicasa* ("Natural" or "Free People"). The word "Sioux" is derived originally from an Ojibwa word, *Nadowe-is-iw*, meaning "lesser adder" ("enemy" is the implication), which was corrupted by French voyageurs to *Nadoussioux* and the shortened to Sioux. Today many people use the term "Dakota," or, less commonly, "Lakota" to refer to all Sioux people. All 13 subdivisions of Dakota-Lakota-Nakota

speakers (Sioux) were known as *Oceti Sakowin*, or Seven Council Fires, a term referring to their seven political divisions: Teton (the Western group, speakers of Lakota); Sisseton, Wahpeton, Wahpekute, and Mdewakanton (the Eastern group, speakers of Dakota); and Yankton and Yanktonai (the Central, or Wiciyela, group, speakers of Dakota and Nakota).

In the late seventeenth century, the Dakotas lived in Wisconsin and north central Minnesota, around Mille Lacs, with the Cooper site in the Mille Lacs-Kathio State Park directly linked to them. The Cooper site, one of only a few protohistoric sites in Minnesota that can be linked to a historic tribe, probably was occupied when Father Louis Hennepin was taken as a prisoner to the lake (Johnson 1969:25). By the nineteenth century the Dakotas had migrated to the prairies and eastern plains of Minnesota, Iowa, Nebraska, and eastern South Dakota. Today, most Dakotas live on reservations in the Dakotas, Nebraska, and Minnesota and in regional cities and towns.

Dakota, Lakota, and Nakota speakers numbered about 25,000 in the late seventeenth century. At that time there were approximately 5,000 Dakota speakers. There were about 12,000–15,000 Dakota and Nakota speakers in the late eighteenth century. Today there are at least 6,000 Dakotas living in the United States and Canada. The Eastern group speaks the Dakota dialect of Dakota, a Siouan language.

The Siouan linguistic family may have originated along the lower Mississippi River, although many groups share an oral tradition, especially Lakota, of an origin in the Black Hills from which they went on a great circular migration, many ultimately returning to their point of origin. Siouan speakers moved to, or may in fact have originated in, the Ohio Valley, where they lived in large agricultural settlements although there has been great difficulty in connecting these sites to specific Siouan speaking tribes (O'Shea and Ludwickson 1992:16). They may also have originated in the upper Mississippi Valley or even the Atlantic seaboard. Landes (1968:20–27) recounts the story of a Santee woman, Susan Windgrow, told in 1968. In the story the tribe migrated from the north and crossed a large "ocean" in about four days. They moved west near three inland lakes around the present state of Michigan. After years of moving west, mostly to hunt, they made their first permanent villages near what is now La Crosse, Wisconsin, and Winona, Minnesota. They fought with the Chippewa, and gave land to the Winnebago, who had no home. The Winnebago wanted to marry into the tribe, but the Dakota refused and moved west again, giving the land to the Winnebago. Some Dakota moved into Iowa.

Whatever the case with this story, some Siouan speakers lived in the southeast, between Florida and Virginia, during the late sixteenth and early seventeenth century. All were destroyed either by attacks from Algonquian tribes or a combination of attacks from non-Indians and non-Indian diseases. Some fled and were absorbed by other tribes. Some were also sent as slaves to the West Indies.

Dakota-Lakota-Nakota speakers ranged throughout more than 100 million acres of the upper Mississippi region, including Minnesota and parts of Wisconsin, Iowa, and the Dakotas, from the sixteenth to the early seventeenth century. Some of these people encountered French explorers around Mille Lacs, Minnesota, in the late seventeenth century, and Santees were directly involved in the great British-French political and economic struggle. Around that time, conflict with the Cree and Anishinabe, who were well armed with French rifles, plus the lure of great buffalo herds to feed their expanding population, induced bands to begin moving west into the Plains. The people acquired horses around the mid-eighteenth century. Dakotas were the last to leave, with most bands remaining in prairies of western Minnesota and eastern South Dakota. They also retained many eastern Woodland/western Great Lakes characteristics. Around 1800, the Wahpeton established villages above the mouth of the Minnesota River. Fifty years later they had moved farther upriver and broken into an upper and a lower division. The Mdewakanton and

Wahpekute tribes (Santee) established villages around the Mississippi and lower Minnesota Rivers and began hunting buffalo communally, competing with the Sauk, Fox, and other tribes.

Dakotas ceded all land in Minnesota and Iowa in 1837 and 1851 (Mendota and Traverse des Sioux Treaties), except for a reservation along the Minnesota River. Santees were served by a lower agency, near Morton, and Sissetons and Wahpetons by an upper agency, near Granite Falls. At the mercy of dishonest agents and government officials, who cheated them out of food and money, and all but overrun by squatters, the Santees rebelled in 1862. Under the leadership of Ta-oya-te-duta (Little Crow), they killed hundreds of non-Indians.

Since many Wahpetons and Sissetons remained neutral, and support for the rebellion was not deep, it shortly collapsed. In reprisal, the government hanged 38 Dakotas, after President Lincoln pardoned over 250 others, and confiscated all Dakota land and property in Minnesota. All previous treaties were unilaterally abrogated. Little Crow himself was killed by bounty hunters in 1863. Many Santees fled to Canada and to the West, to join relatives at Fort Peck and elsewhere. Many more died of starvation and illness during this period. Mdewakanton and Wahpekute survivors were rounded up and finally settled at Crow Creek, South Dakota, a place of poor soil and little game, where hundreds of removed Dakotas died within one year. The long Santee occupation of the eastern Woodlands/prairie region ended.

In 1866, Santees at Crow Creek were removed to the Santee Reservation, Nebraska, where living conditions were extremely poor. Most of the land was allotted in 1885.

Missionaries, especially Congregationalists and Episcopalians, were influential well into the twentieth century. Most people lived by subsistence farming, hunting, fishing, and gathering. Two reservations were established for Wahpetons and Sissetons around 1867: the Sisseton-Wahpeton Reservation, near Lake Traverse, South Dakota, and the Fort Totten Reservation, at Devil's Lake. By 1892, two-thirds of the Lake Traverse Reservation had been opened to non-Indians, with the remaining one-third, about 300,000 acres, allotted to individuals. In order not to starve, many sold their allotted land, so that more than half of the latter acreage was subsequently lost. For much of the early twentieth century, people eked out a living through subsistence farming combined with other subsistence activities as well as wages and trust-fund payments. Several hundred Dakotas left the Santee Reservation in 1869 to settle on the Big Sioux River near Flandreau, South Dakota, renouncing tribal membership at that time. Some federal aid was arranged by a Presbyterian minister, but by and large these people lived without even the meager benefits provided to most Indians. Some Flandreau Indians eventually drifted back to form communities in Minnesota. The official status of these communities was uncertain well into the twentieth century. All are now federally recognized and several have established successful casinos to provide employment and to build reservation infrastructure.

Chapter 6. History of Effigy Mound Research: A Regional Overview

by William Green

As noted in Chapter 4, the central place of effigy mounds in the establishment and identity of Effigy Mounds National Monument, and the variety of questions and claims regarding these mounds, have led us to give particular attention to effigy mounds and their builders. Effigy mounds are ancient, intriguing, puzzling, and challenging elements of the midwestern landscape. They can be appreciated as earth sculptures, mortuary and ritual structures, sacred places, sources of historical and scientific information, or any and all of the above. It is trite but no less true that one takes away from effigy mounds what one brings. We strive in this report to bring a variety of approaches and perspectives to bear on the question of effigy mound affiliations, so that readers and users have access to a range of relevant information. Therefore, we have prepared three chapters that deal with particular aspects of effigy mound studies: history of research, biological affiliation, and perspectives on mound ages, origins, and cultural affiliations. In addition, Appendix D treats the subject of traditional viewpoints on effigy mounds.

The present chapter reviews the history of archaeological research on effigy mounds and the Effigy Mound "culture." It employs an organizational framework drawn from the histories of archaeological work by Anderson (1975), Hurley (1975), McKusick (1979), and Willey and Sabloff (1974), and others, tailoring the review to the main trends of effigy mound research. Important sources utilized in this chapter include two recent syntheses on effigy mounds: Stoltman and Christiansen (2000) and Birmingham and Eisenberg (2000). Other works containing histories of effigy mound research that cover most of the effigy mound area include Benchley et al. (1997b), Hurley (1975), Mallam (1976), and Petersen (1984). Bennett (1945) and Boris (1984) focus on effigy mounds in Illinois, while the Minnesota statewide mound analysis (Stevenson et al. 1999) includes information on that state's effigy mounds. Goldstein (1995) presents a southeastern Wisconsin regional review of effigy mounds. Lenzendorf (2000), O'Bright (1989), Dial (1996a), Dial-Jones (1999), and Chapter 3 of this report cover the history of research in and around Effigy Mounds National Monument itself.

The discussion in the present chapter emphasizes the history of the principal effigy mound researchers and their contributions, focusing on major field studies rather than analytical work. Chapter 8 discusses interpretations of effigy mounds among these researchers and the changing conceptions within the anthropological community of the ages, origins, and cultural affiliations of the mounds.

When referring to the people who built the effigy mounds and to the archaeological traces of those people, we generally use the term "culture" in the sense of an archaeological culture (Stoltman and Christiansen 2000; Willey and Phillips 1958), i.e., "Effigy Mound culture." We would prefer to refer to Effigy Mound as a "variant" of the Woodland tradition rather than a culture (Benn and Green 2000; Green 1996, 1999) because "culture" is a term that has numerous possible meanings and implications, especially in terms of social organization and group identity, and thus is poorly suited to refer to groups of artifacts, features, and sites. "Variant" is a mid-range integrative taxon that refers to a network of related though not necessarily precisely coeval phases (e.g., Krause 1977, 1989; Lehmer 1971). A variant is not a group continuity (see Chapter 2, this report) although the variant taxon may be used to integrate or illustrate relationships

among several group continuities in different localities or regions. Commonly used on the Great Plains and in the Gulf-Southeast, the variant taxon has been applied only sparingly to Upper Mississippi valley archaeology (e.g., Benn and Green 2000; Green 1999; Tiffany 1986a). The Effigy Mound "culture" or "variant" can be fairly precisely defined in terms of time, space, and content, so it may not matter which modifier is used. Because "culture" is widely used and deeply entrenched, we generally use it here while recognizing its shortcomings in archaeological usage.

The area in which effigy mounds are found, and which therefore constitutes the geographic extent of the Effigy Mound "culture," is shown in Figure 6. Figure 7 depicts all northeast Iowa sites with effigy mounds, including sites within the EFMO boundaries.
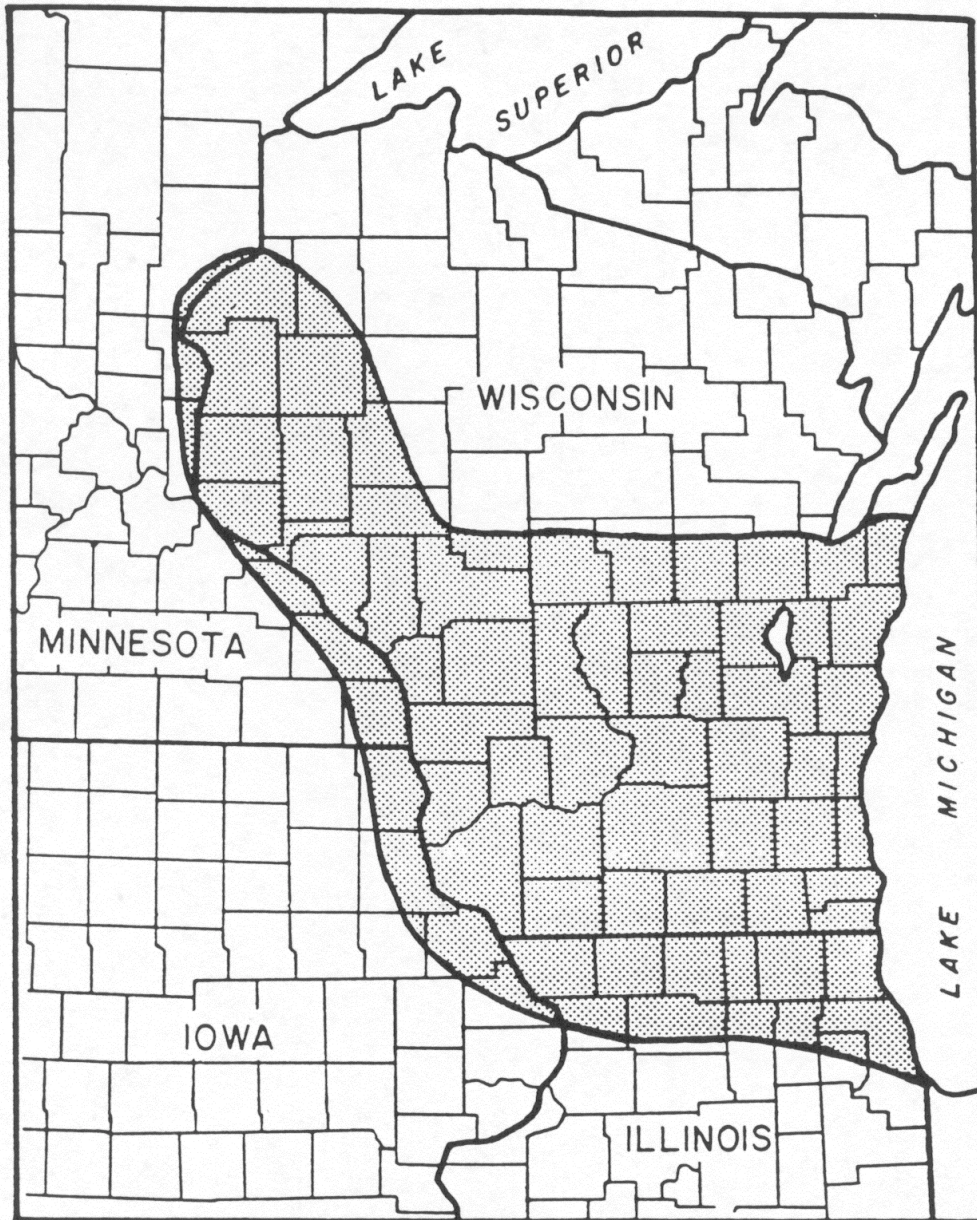
Figure 6. Geographic extent of the Effigy Mound culture (from Goldstein 1995).
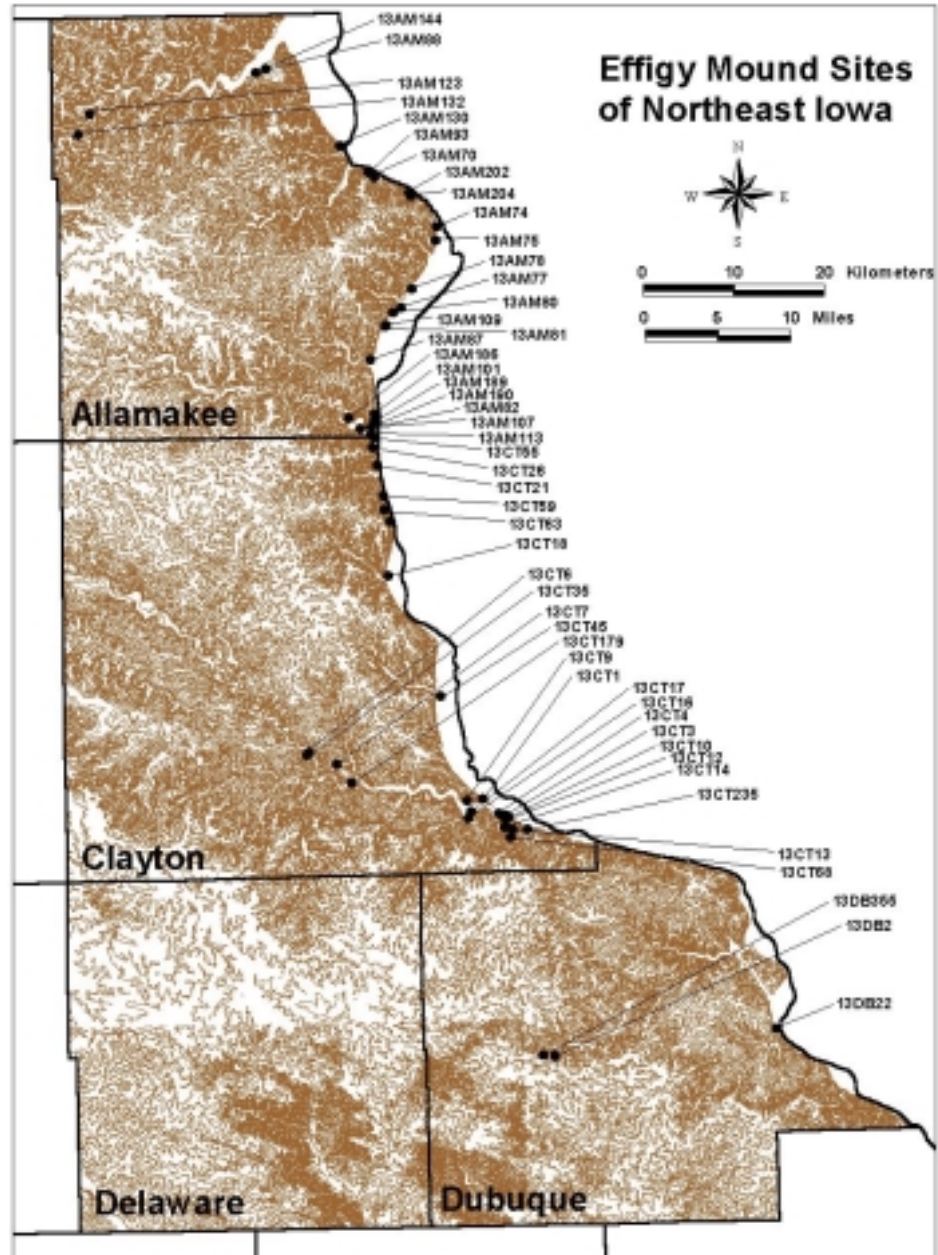
Figure 7. Effigy Mound sites of northeast Iowa (sites containing at least one effigy mound).

PERIOD I: DESCRIPTION AND CLASSIFICATION, 1838–1901

While the first wave of mound explorations in the U.S. focused on the Ohio valley, studies of Mississippi valley mounds did not lag far behind (Kennedy 1994; Squier and Davis 1848). Observations on the effigy mounds of the Upper Mississippi valley began in the 1830s at the time the U.S. government was implementing Indian removal policies across the Upper Midwest. As surveyors, explorers, writers, and settlers described the features of Wisconsin Territory to their sponsors and readers, they often mentioned the antiquities they encountered. The earliest published accounts of effigy mounds were written by Increase A. Lapham, Richard C. Taylor, and John Locke in the late 1830s (Lapham 1836; Locke 1844; Taylor 1838). These surveys described several southern Wisconsin effigy mounds in detail and laid the groundwork for many additional surveys and publications in the 1840s and 1850s (e.g., Lapham 1844; Taylor 1843), including Squier and Davis's landmark compilation, *Ancient Mounds of the Mississippi Valley* (1848). The crowning achievement of the pre-Civil War effigy mound studies was Lapham's *Antiquities of Wisconsin* (1855), a book that contained accurate, detailed maps of hundreds of mounds as well as insightful discussions regarding mound ages, functions, and builders.

The post-Civil War decades of the 19th century saw an accelerated rate of mound documentation through mapping and excavation. Most of this work in the Effigy Mound region was conducted by a large number of self-taught antiquarians (see references to most of this work in Starr 1892 and Wittry 1961). Among those who worked in the study area and surveyed effigies and other mounds were Moses Strong (1877, 1878), assistant State Geologist of Wisconsin, and northeast Iowa native W. J. McGee (1878), later to head the Bureau of American Ethnology at the Smithsonian Institution and to become a close associate of Cyrus Thomas (Muller 1996). The most significant work during the late 1800s was conducted by surveyors with long-term research interests and those representing larger enterprises. Three of the large-scale late 19th-century surveys that fit this description were those of (1) Rev. Stephen D. Peet, founder and editor of the *American Antiquarian and Oriental Journal*, (2) Theodore H. Lewis and Alfred J. Hill of the Northwestern Archaeological Survey, and (3) Cyrus Thomas of the Bureau of American Ethnology, Smithsonian Institution.

S. D. Peet was a prolific author and editor with a sound reputation in contemporary national and international archaeological circles. A Beloit College graduate, he wrote hundreds of articles on archaeology and Indians from the mid-1870s through the early 1900s. His interest in effigy mounds was strong, and he examined and described a large number of effigy mound groups and related sites around his southern Wisconsin home and elsewhere in the Midwest. His preference for careful archaeological survey over "relic hunting" led him to criticize harshly the Smithsonian Institution's mound exploration program (Peet 1884), but in spite of this rebuke (or perhaps because of it), within two years the Smithsonian engaged him in southern Wisconsin mound survey and excavation (Peet 1887:75–76; Thomas 1891). Still, Peet conducted most of his work independently, and he published his observations and interpretations extensively, mostly in his own journal. He compiled many of his writings on effigy mounds in *Emblematic Mounds and Animal Effigies* (1893), the second volume of his self-published 5-volume set *Prehistoric America*. That volume stood for many decades as the only effort to deal comprehensively with the effigy mounds. Although Peet promoted precision in archaeological survey, his numerous published maps of effigy mound groups were less accurate and reliable than those of professional surveyors such as Locke, Lapham, and Lewis (see below). Peet's survey, part of a lifetime of serious work in American archaeology, represents perhaps the apogee of the personal, non-professional, scientific-antiquarian approach to the study of effigy mounds.

The Northwestern Archaeological Survey (NAS), funded by Twin Cities civil engineer and businessman Alfred J. Hill and conducted by surveyor Theodore H. Lewis, was a 15-year-long effort to record mounds throughout central North America. During the 1880s and 1890s, Lewis documented as many as 17,000 mounds throughout the central U.S. and part of Canada (Benchley et al. 1997b; Keyes 1928; Lewis 1898). Lewis mapped many mounds within the current EFMO boundaries (Lewis 1885a, 1885b). Although Lewis published dozens of short articles on effigy mounds and other aspects of his work, no comprehensive report was published on the NAS due to Hill's death and Lewis' relocation out of the region. However, the NAS Minnesota data were compiled and published in 1911 (Winchell 1911), and Dobbs (1986) and Haury (1993), have reviewed the Wisconsin and Iowa NAS data, respectively. Lewis' maps, notes, and letters are curated at the Minnesota Historical Society (Dobbs 1991). These records have proven to be extremely valuable in research on effigy mounds and other sites in the study region (e.g., Green 1989; McKusick 1964b).

Lewis reported and mapped most of his Iowa, Minnesota, and Wisconsin sites in a reliable and verifiable way, but the largest site he reported is also perhaps his most enigmatic and least certain site. This is the "Harpers Ferry Great Group" (13AM79), reportedly situated on the high, broad, Wisconsinan terrace 10 km (6 miles) north of EFMO (Mallam 1976a:24; 1982:355–357). Lewis stated that approximately 900 mounds were present there, including 276 effigies or probable effigies (Lewis 1892; see Table 4). However, other than providing counts and estimates of the various mound types, and noting that most of the mounds had been either damaged or destroyed by cultivation, Lewis reported nothing else about the site. Although Mallam believed this was "the largest mound group ever recorded in North America" (1982:357), Lewis' report is unverified by other observers. Moreover, Petersen (1986b) reviewed Lewis' letters and notes pertaining to the locality, as well as published reports by other mound surveyors, and concluded there are good reasons for skepticism about the existence of a site of the magnitude Lewis noted. It is possible, of course, that 900 mounds really did exist at Harpers Ferry. As Petersen suggests, Lewis might have been so overwhelmed by the abundance of mounds that he could not record them in the detail he accorded to nearly every other mound he encountered. For example, Lewis conducted only an abbreviated survey of the 138 large mounds he encountered in and around the Cahokia site in Illinois. However, even there he recorded basic locational data (Finney 2000b). Lewis did take the time to map Wisconsin and Minnesota sites with hundreds of mounds (Petersen 1986b). Therefore, Petersen found it curious and odd that Lewis would record so little information about the Harpers Ferry mounds. There are indeed several documented mound groups on and near the Harpers Ferry terrace, but their mounds probably numbered in the dozens rather than the hundreds. Therefore, what may have been the largest single group of effigy mounds also is so poorly documented that its inclusion in the effigy mound data base must be tentative.

The most significant mound study—even though it was second to the NAS in number of mounds mapped—was the work of the Smithsonian Institution's Division of Mound Exploration. This survey had a broad scope, generating data from 22 states, including those of the Upper Mississippi valley. Within the study region, P. W. Norris, J. D. Middleton, S. D. Peet, and others mapped hundreds of mounds and enclosures under Cyrus Thomas's overall direction. Unlike Lewis, they also excavated a large number of mounds. Significant sites investigated by Smithsonian teams in the study area included several along the Upper Iowa River at the Hartley Terrace and nearby locations in Allamakee County, as well as an "elephant" effigy mound in Grant County. Thomas concluded the latter to have been a bear mound with an eroded head (Thomas 1894:91–93, 99–107).

Lapham's surveys and those of other mid-19th century researchers had led to a common understanding that the effigy mounds of the "west" were confined almost exclusively to Wisconsin. Thomas's more extensive data on mound distributions led him to refine the distribution of effigy mounds in a way that matches current conceptions in most respects: effigies are found throughout the southern half of Wisconsin, plus northernmost Illinois, northeastern Iowa, and the southeast corner of Minnesota (Thomas 1891; 1894:531). As Thomas suspected, the boundary has moved north somewhat as more data were obtained subsequent to his survey; it has also moved slightly south (Figure 6).

Thus, by the end of the 19th century, research of statewide and regional scope (e.g., Peet 1893; Starr 1897; Thomas 1894) revealed that Wisconsin and eastern Iowa contained thousands of mounds. Furthermore, these studies documented the disappearance of many sites due to farming, logging, construction, and other development. The need for systematic, statewide mound documentation programs and coordinated archaeological study in general became apparent.

PERIOD II: DESCRIPTION, CLASSIFICATION, AND HISTORY, 1901–45

The first decades of the 20th century saw attempts to make progress in archaeology on a systematic basis in Minnesota, Iowa, and Wisconsin. Each state's program differed. Minnesota's effort commenced with J. V. Brower's and N. H. Winchell's careful analyses of the NAS data, published in *The Aborigines of Minnesota* (Winchell 1911), an encyclopedic treatise on Minnesota archaeology. Little field work then occurred until the 1930s when A. E. Jenks and then his student Lloyd A. Wilford began a statewide research program based at the University of Minnesota. Wilford directed almost all archaeological work done in Minnesota between 1938 and 1959 (Benchley et al. 1997b:54–55). The amount of work at Effigy Mound sites was small, however, with excavation at only one effigy mound.

Wisconsin's early-20th-century efforts included two main sets of programs: those of the Wisconsin Archeological Society and State Historical Society of Wisconsin, coordinated by Charles E. Brown, and those of the Milwaukee Public Museum, conducted initially by Samuel A. Barrett and then expanded by W. C. McKern. Wisconsin Archeological Society members supplied Brown with information on hundreds of sites, including effigy mounds, and Brown cataloged the raw data, published summaries and detailed reports in *The Wisconsin Archeologist*, and mapped on sets of county plat maps all sites for which he had sufficient data. Brown archived and published hundreds of maps of individual mound groups that were prepared by enthusiastic and expert but non-professional surveyors such as George R. Fox, Milton Hulburt, and George H. Squier, as well as by Brown himself. In addition to developing a statewide archaeological inventory, Brown tirelessly advocated site preservation. Despite the continued loss of many sites to development, hundreds of mounds were preserved directly through Brown's efforts or indirectly as a result of his influence (Birmingham and Eisenberg 2000).

The Milwaukee Public Museum's archaeological research took a different tack. Barrett and McKern, Ph.D.-holding anthropologists from the University of California, sought to address a variety of research questions that often required extensive excavation. They were especially interested in cultural classification, variability, and history. McKern decided to study spatial variability by examining sites along an east-west transect across Wisconsin, cross-cutting the state's major drainages. MPM teams excavated habitation sites as well as mounds. Effigy mound groups were the focus of MPM excavations in 1917, 1925, 1927, and 1932 (Barrett and Hawkes 1919; McKern 1928b, 1930; Rowe 1956). The principal result of these studies was acquisition of detailed knowledge of effigy mound structure, burial forms, and artifact assemblages. MPM studies and other professional excavations during the first half of the 20th century excavated over 193 Wisconsin mounds, including at least 60 effigies, at sites attributed to the Effigy Mound

Aspect (Rowe 1956:15–16). McKern defined this cultural unit after organizing these data within the Midwestern Taxonomic Method, a tool he developed for ordering archaeological complexes by their contents in order to detect similarities and relationships among them (McKern 1939). Most but not all of the mounds were found to contain burials, and many had rock features termed "altars."

Archaeological research in eastern Iowa stagnated between 1900 and 1920 despite the groundwork established by 19th century investigations and compilations (Starr 1892, 1897; see Benchley et al. 1997b:40–41; Kurtz 1979). For example, the Davenport Academy of Science, the only Iowa institution that had sponsored extensive research in the 1800s, virtually halted its archaeological program after taking a beating from the Smithsonian Institution over its support of the fraudulent "Davenport Tablets" and effigy pipes (McKusick 1970, 1991). Similar declines in archaeological research and publication pervaded the Midwest except for Wisconsin during the two decades immediately following Thomas' (1894) mound survey report (Kurtz 1979). However, during the 1910s, northeast Iowa resident Ellison Orr conducted independent research and promoted mound preservation (e.g., Orr 1913, 1914, 1917a, 1917b), work that would lead to his pivotal involvement in the Iowa Archaeological Survey.

Between 1920 and 1950, nearly all Iowa archaeological research was conducted or coordinated by Charles Reuben Keyes, professor of German language and literature at Cornell College, Mt. Vernon, Iowa. During summers, other spare time, and after his retirement, Keyes directed the Iowa Archaeological Survey on behalf of the State Historical Society and State University of Iowa. Modeled to a degree after state surveys in Ohio and Wisconsin, Keyes assiduously collected all information he could regarding archaeological sites and artifacts throughout the state. He published annual summaries and occasional syntheses based on the enormous amount of data generated by his own research and that of his hundreds of correspondents (e.g., Keyes 1927, 1941, 1951). Keyes literally defined Iowa archaeology during this crucial period of the discipline's transition to professionalism (see Green 1992 and references therein), and he was an avid proponent of archaeological conservation and preservation (Keyes 1932, 1933).

Scraping up funds from federal relief programs and other sources, Keyes hired Ellison Orr to serve as the field director for several projects including an extensive mound survey program along the Mississippi River and in northeast Iowa. These surveys recorded hundreds of mounds in great detail, including most of the mounds now located within the EFMO boundaries (e.g., Orr 1935a, 1937b, 1942). Orr and Keyes also were influential proponents of establishing a national park devoted to Indian mound preservation in the Upper Mississippi valley, a movement that led to the Monument's establishment (Keyes 1933; Orr 1917a, 1917b).

Despite the seminal contributions of Keyes and Orr, the mid-century position of Iowa archaeology lagged behind that of surrounding states (Green 1992; Jennings 1955; Logan 1955). With the exception of a short-lived Davenport Public Museum director, no professional archaeologist was employed or trained in the state before 1950. Keyes' published reports were mostly of a general rather than technical nature. Orr's detailed reports were not published until 1963, and then only in microcard format (see McKusick 1979). Regarding effigy mounds in particular, National Park Service archaeologist Jesse Jennings noted in 1947 that no systematic analysis of the "Effigy culture" had been made for Iowa.

PERIOD III: HISTORY AND CONTEXT, 1945–1971

Soon after World War II, archaeology in Wisconsin, Iowa, and Minnesota, especially studies related to effigy mounds, changed in character. Wisconsin saw the retirement of C. E. Brown from the State Historical Society of Wisconsin and W. C. McKern's move from Curator of Anthropology to Director of the Milwaukee Public Museum. The new generation of

archaeologists included David A. Baerreis at the University of Wisconsin (Madison), Chandler Rowe at Lawrence College, and Moreau Maxwell at Beloit College. University of Wisconsin students Robert L. Hall and Warren Wittry also worked at the State Historical Society. Field work, often coordinated through the state's professional organization, the Wisconsin Archeological Survey, included extensive studies of habitation sites as well as mounds (see Benchley et al. 1997; Kehoe 1997; and especially Birmingham and Eisenberg 2000). Excavations in 1948 at Diamond Bluff documented an association of Middle Mississippian-like ceramics with the construction of a "panther" effigy mound (Maxwell 1950; Rodell 1991, 1997). The habitation site studies at rockshelters and open-air sites attempted to investigate the material culture and domestic life of prehistoric peoples, including the effigy mound builders. Baerreis defined the pottery and projectile point types associated with various Woodland groups, including Effigy Mound (e.g., Baerreis 1953), which allowed subsequent studies to focus on such subjects as settlement patterns and technological change. These studies also formed the groundwork for the ecological research initially related to questions of climate and culture that began in the 1960s and that continued and were extensively reported from the 1970s onward (see below).

Chandler Rowe's 1951 doctoral dissertation and 1956 monograph, *The Effigy Mound Culture of Wisconsin*, reviewed the archaeological information at hand from excavated effigy mound sites in an attempt to provide a comprehensive review of effigy mound archaeology. Rowe made a particular effort to classify mounds and to study the possible relationships between mound shapes and historically recorded clans within local Indian cultures. Rowe's publication also reported on McKern's 1932 excavation of the Raisbeck Mound Group in Grant County.

In Iowa, Keyes and Orr both died in 1951. The Iowa Archeological Society was founded in that year, drawing on EFMO and University of Iowa anthropologists and a group of enthusiastic nonprofessionals. Studies conducted by National Park Service archaeologists at EFMO, beginning in 1950, signaled the start of extensive professionally-directed field programs in Iowa. Lenzendorf (2000) and O'Bright (1989) chronicle these research-oriented programs within the monument boundaries (see also Chapter 3, this report). The focus in the 1950s at EFMO was on mound research, following up on some of Jennings' (1947) recommendations (e.g., Beaubien 1953b, 1953c; Logan 1958, 1976; see also Appendix B, this report). The EFMO soil genesis studies (Parsons 1960, 1962; Parsons et al. 1962) were notable efforts in paleoenvironmental research that influenced subsequent work in northeast Iowa and in Wisconsin (Bettis 1988; Hurley 1971). Mound excavation diminished as the emphasis shifted toward preservation, restoration, and interpretation. Elsewhere in the region, Marshall McKusick directed University of Iowa excavations during the 1960s at several mounds and habitation sites in nearby parts of northeast Iowa (see, e.g., McKusick 1964a, 1964b), and reports on some of the Keyes and Orr studies in the region were prepared and published (Logan 1958, 1976; Orr 1963; Wedel 1959).

In Minnesota, Wilford conducted field work every year until 1957. Elden Johnson, his student and successor at the University of Minnesota, continued excavations throughout the state from the 1950s through the 1970s (Benchley et al. 1997; Streiff 1972). As noted earlier, little of this work dealt with effigy mounds.

In all three states during the 1950s and 1960s, research centered on determining cultural-historical sequences and relationships. Archaeologists applied expanded arrays of chronological data sources (radiocarbon dating, extensive and careful excavation of stratified deposits) and more comprehensive cultural inventories derived from a wide variety of site types. As in American archaeology generally, the enormous expansion of research in the post-war period generated large data sets, extensive collections, and numerous publications. The research was conducted primarily within the cultural-historical tradition, supplying essential baseline data on content, sequences, and relationships of archaeological sites and complexes. Researchers of the

previous period had relied upon the tools of the Midwestern Taxonomic Method, among them the trait list, to organize the archaeological record, including definition of the Effigy Mound Aspect. During the 1950s and 1960s, as the limitations of that approach clashed with the need to expand the scope and temporal precision of archaeology, research on Effigy Mound and other complexes attained clearer understandings not only of the mounds but also of the lives of their builders.

PERIOD IV: CONSERVATION, ECOLOGY, PROCESS, AND IDEOLOGY: 1971–PRESENT

From the 1970s through the present, researchers have approached Effigy Mound studies with the diverse package of interests and approaches that have been applied to other midwestern archaeological complexes. Some of the main themes have been:

1. expanded interests in cultural processes and environmental archaeology
2. extensive, systematic survey for settlement pattern and mound distribution studies
3. conservation and preservation of sites and data through federal and state sponsorship of archaeological work and through salvage excavation
4. rejuvenation of interests in ideology and belief systems

Significant Effigy Mound research published in the 1970s included Hurley's (1975) and Mallam's (1976a) monographs. Hurley's study, based on field work conducted in the 1960s, examined central Wisconsin effigy mound complexes through extensive excavations in order to understand their ages, construction features, environmental relationships, and utilitarian technologies (ceramic, fabric, and stone). In contrast, Mallam used mound distribution and measurement data to test hypotheses regarding Effigy Mound social and territorial organization. Some of the differences in their approaches and perceptions, and in those of other researchers, are highlighted in several reviews of Mallam's book and his reply (Mallam 1980).

Large-scale surveys that included or focused on effigy mounds in the study region were conducted by Halsey (1972) on the Wisconsin side and by the ambitious program of Mallam, Petersen, and colleagues in Iowa (e.g., Lippitt et al. 1971; Mallam 1973, 1975, 1976a, 1982a, 1984a; Petersen 1983, 1984, 1986a; Stanley 1991; Stanley and Stanley 1986). The Iowa surveys included systematic mapping and aerial photography of each known and surviving effigy mound group in the state (e.g., Mallam 1982a, 1984a; Mallam and Mount 1980).

From his position at Luther College, Mallam surveyed Allamakee, Clayton and Dubuque counties, identifying "over 53 Effigy Mound complexes containing over 1,426 mounds" (Mallam 1976b:5). Today, 70 Effigy Mound sites are recorded in Iowa (Table 4), based on information gathered primarily from the Iowa site record files and the reports by Petersen (1983, 1986a), Mallam (1973, 1975), and Stanley (1991, 1993). These sites either currently contain or once were reported to contain at least one effigy mound. Based on the earliest documented records, and including the Harpers Ferry Great Group (13AM79), these sites contained 390 effigy mounds, 251 linear mounds, 117 compound mounds, and 831 conicals. The majority of the effigies, 321 (82.3 percent), have been destroyed or are no longer discernible at the ground surface. Of the 56 confirmed effigy mounds, 26 (46.4 percent) are located within the current boundaries of Effigy Mounds National Monument. Thirteen effigies could not be confirmed, i.e., mounds that have not been seen in the recent past (since Petersen 1986a) or were possibly not effigies.

Through Mallam's lobbying of the author, Petersen's (1979, 1984) effort to verify the locations of all effigy mounds in Iowa was extended into six counties of southern Wisconsin. The consistent result that about 80 percent of the mounds had been leveled fueled attempts at conservation through National Register nominations and local preservation measures. Realization of the high destruction rate also contributed to the successful effort to pass burial site protection

Table 4. Sites in Iowa Containing Effigy Mounds.

Site no.	Effigy description	No. of effigies	No. extant effigies	No. destroyed effigies	Other mound types conical	linear	compound/other
13AM69	3 bears	3	2	1	24	5	
13AM70	1 bear	1		1	1		
13AM74	1 bear	1		1		1	
13AM75	1 bear	1		1			
13AM76	1 bird	1		1	1		3
13AM77	1 tailed effigy/bear?	1		1			
13AM78	1 bear	1	?				
13AM79	107 bears, 67 birds, 98 unspecified	272		272	469	154	98
13AM80	1 bear	1		1			
13AM81	1 bear	1	1		1	2	
13AM82*	2 bears	2		2	39	12	6
13AM87	1 bear, 1 bird	2		2	5	9	
13AM88	1 bear	1	1			2	
13AM93	1 bear	1		1		1	
13AM101*	1 bear	1	1		5	1	
13AM107	1 bird	1	1				
13AM109	1 animal effigy	1		1	1		
13AM113*	1 bear	1	1			2	
13AM123	1 bear	1	1		4	3	
13AM130	2 bears (1 largely destroyed)	2	2		1		
13AM132	1 bird	1	1				1
13AM144	3 bears	3	?				
13AM186	2 bears	2	2				
13AM189*	4 bears, 1 wildcat/lynx	5	2	3	7	5	
13AM190*	1 bear	1	1		19		
13AM202	2 birds, 4 bears	6	6			1	
13AM204	2 birds	2	2				
13AM** Klitt Farm	1 "elephant-shaped" mound	1		?			
13AM** Oil Springs Creek	2 effigies	2		?	5	3	
13AM** Wexford Creek	1 unspecified effigy	1		1	12	1	
13CT1	1 tailed effigy	1	1		20	8	2
13CT2	1 tailed effigy/panther?	1		1		2	
13CT3	2 turtles/tailed quadrapeds	2		2	4	1	
13CT4	1 tailed effigy	1		1	3	2	
13CT5	1 tailed effigy	1	1		9	3	
13CT6	4 short-tailed effigies	4		4	4		1
13CT7	3 effigies (including 1 human)	3		3			1
13CT8	1 tailed effigy	1		1		4	1

Table 4. continued.

Site no.	Effigy description	No. of effigies	No. extant effigies	No. destroyed effigies	Other mound types		
					conical	linear	compound/other
13CT9	1 tailed effigy, 1 turtle	2		2	4	1	1
13CT10	1 "woman" effigy	1	1		3		
13CT12	2 panthers	2		2		1	
13CT13	1 tailed effigy	1		1		1	
13CT14	1 tailed effigy	1		1			
13CT15	1 panther	1		1			
13CT16	1 effigy	1		1			
13CT17	1 bird	1		1			
13CT18*	3 bears, 2 birds	5	5		88	6	
13CT21	1 bird	1	1				
13CT26*	10 bears, 3 birds	13	13			2	
13CT35	1 "otter" effigy	1		1			
13CT45	1 tailed effigy	1		1	32	2	1
13CT55*	1 bear, 1 bird	2	2				1
13CT59	2 bear effigies	2	1	1	4	1	
13CT62	1 bear	1		1	1	3	1
13CT63	3 bear ("buffalo") effigies	3	1	2	5	3	
13CT65	1 bear	1	1		10		
13CT68	1 tailed lizard or turtle effigy	1	1				
13CT179	1 tailed effigy, eroded	1	1				
13CT235	1 tailed effigy	1		1	16	2	
13CT***	1 unspecified effigy	1	1				
13DB2	1 animal, 2 tailed (mapped by Lewis)	3		3		3	
13DB22	1 bear	1	1				
13DB355	1 animal effigy, Keyes report, unconfirmed	1	?				
13DB** Hogan's Branch	1 tailed effigy	1		1			#?
13DK2	1 serpent effigy, Keyes report, unconfirmed	1	?				
13DM161	1 poss. effigy (Petersen 1986a:93)	1	1		9		
13JK225	1 poss. effigy	1	?		2		
13LN22	1 "effigy," unconfirmed	1?	?		23	4	
13PW44	1 bear, Keyes report, unconfirmed	1	?				
13WP232	1 poss. turtle effigy, unconfirmed	1	?				
TOTAL		**390**	**56**	**321**	**831**	**251**	**117**

Total all mounds: 1,589

? = current condition unknown

* sites within Effigy Mounds National Monument (excluding the Ferguson Tract) as of July 2000

** reported by Petersen (1986a); no assigned site numbers as of July 2000

*** reported by Mallam (1973); located in the NW, SE 1/4 Sec. 32, T92N, R3W; no assigned site number as of July 2000

legislation in Wisconsin (Birmingham and Eisenberg 2000; Green 1985). Subsequent work that firmed up the large Wisconsin effigy mound data base included a detailed archival-based assessment of all southeastern Wisconsin counties by Goldstein (1995) and a statewide assessment also based on published and archival sources (Birmingham and Eisenberg 2000; Christiansen 1998).

In recognition of conservation needs and Indian concerns, very little effigy mound excavation has taken place since the 1960s except in salvage situations. However, habitation sites determined to be associated with the effigy mounds have been tested and excavated in large numbers over the past 30 years. Many are seasonal camps on floodplains or in rockshelters, probably used for alternating warm- and cool-season occupation and resource extraction. The economic base of Effigy Mound life in the EFMO-Prairie du Chien locality has been examined in detail through faunal and floral analyses that reveal increasing roles for plant cultivation and local shellfish exploitation, suggesting greater levels of commitment to particular territories. Still, populations maintained seasonal movements within those territories (see, e.g., Arzigian 1987; Benn 1979; Stoltman 1990; Stoltman and Christiansen 2000; Storck 1974; Theler 1987) and possibly beyond, as far as central Iowa (Collins 1991). Cultural resource management studies have supplied data on Effigy Mound settlement and technological systems at EFMO (e.g., Collins 1999) and elsewhere in the study region (e.g., Collins et al. 1997).

Well established material culture correlations between effigy mounds and contemporary habitation sites, along with larger series of radiocarbon dates, led to refinement of the Effigy Mound tradition or culture concept and definition of several regional phases. The age of the era of effigy mound building was determined to be ca. A.D. 650 or 700 – ca. A.D. 1000 or 1050 (Stoltman and Christiansen 2000). The Keyes phase was defined on the basis of effigy mounds and associated Madison Cord-impressed and Fabric-impressed ceramics from this period in Iowa (Benn 1979; Benn and Green 2000). The Eastman phase occupies a similar niche in southwestern Wisconsin (Stoltman 1990; Stoltman and Christiansen 2000), and the Lewis phase encompasses the distinctive effigy mound forms, lithic assemblages, and ceramics of west-central Wisconsin north of the Coon Creek drainage (ca. 20 km. north of the Iowa-Minnesota line), from the Mississippi River to the Wisconsin River (Boszhardt and Goetz 2000). Rosebrough (2000) reviews the current status of Effigy Mound regional variability and taxonomy.

The past 30 years have seen development of a series of interpretive models and hypotheses regarding the functions of effigy mounds and the social organization and ideologies of their builders. Beginning with Mallam's work, these models attempt to incorporate Effigy Mound peoples' economic systems, social organization, ritual and ceremonial behavior, and ideology into an integrated approach to understanding Late Woodland culture (see, e.g., Benn 1979; Benn and Green 2000; Birmingham and Eisenberg 2000; Goldstein 1995; Mallam 1976, 1982a, 1983, 1984b). Some of these models and interpretations are addressed in Chapter 8.

Chapter 7: Biological Affiliation Research on Effigy Mound

by Robin M. Lillie

Investigating the biological affiliation of prehistoric populations requires analysis of morphological and metric features of osseous human remains. The genetic relatedness of populations is then defined on the basis of variation in these features (Buikstra et al. 1990:1). Assuming that populations displaying the most similarity are most closely related to each other (White 1991), sampling and the osteological traits chosen for comparison are the key factors that determine the validity of a biological relationship study (Ubelaker 1989). Biological distance studies are based directly on the osteological evidence rather than cultural remains, which can be shared by biologically diverse populations. Human skeletal remains from archaeological contexts represent only a portion of the original population. Any population sample should be sufficient to accurately reflect the total population. However, numerous factors can affect the sample.

> Skeletal samples are often tacitly assumed to represent biological populations, but this is seldom the case. They can depart from this ideal in several respects. First, they commonly represent an accumulation of deceased individuals over time (sometimes several thousand years). Not all individuals in the sample [were] alive at the same time; therefore, some had zero probabilities of mating. A sample with a long depositional context represents an amalgamation of microevolutionary effects and is more properly termed a "biological lineage" (Cadien et al. 1974). Second, archaeological sites are often multicomponent in nature, and the derived sample may intermix distinct biological populations. These populations may not be distinguishable on archaeological grounds. Finally, virtually any human society contains nongroup members ("outliers" in the statistical sense) that may be incorporated into the sample and distort the patterns of variability. [Key and Jantz 1990:53]

Differential preservation of skeletal remains can result in underrepresentation of certain subgroups within a skeletal population. For example, Walker et al. (1988) examined poorly preserved human skeletal collections to study the effect of differential preservation on the reconstruction of past population structure. They found that infants and elderly people are likely to be underrepresented. These findings are applicable to biological affiliation studies as well, since, in poorly preserved skeletal samples, the population is not as likely to reflect the original population.

Human skeletal samples also must be of sufficient size to account for population variation. The recommended sample size for each comparative population is at least 100 individuals (Ubelaker 1989:131). "Small samples, and especially single individuals, may be impossible to identify with certainty because their representativeness…is unknown" (Ubelaker 1989:132). Successful biological affiliation studies (i.e., Droessler 1981; Jantz 1974) incorporate large samples from well-documented contexts, utilizing a selection of traits that are least likely to be affected by environmental factors. Cultural factors, such as intentional cranial deformation, also must be considered.

With these guidelines in mind, I began this study of the biological affiliation of the Effigy Mound people with a review of previous osteological analyses of Effigy Mound human skeletal

remains in Iowa, Illinois, Minnesota, and Wisconsin and a determination of the skeletal material available for examination. The proposed focus, using noninvasive techniques, was on cranial remains. My intent was to examine craniometric and nonmetric data, which are considered fundamentals for distinguishing populations (Lovvorn et al. 1999). Only those sites with documented effigy type mounds and sites within Effigy Mounds National Monument (EFMO) boundaries were included in this study.

PREVIOUS BIOLOGICAL AFFILIATION STUDIES

The major published report on biological affiliation incorporating Effigy Mound culture skeletal material is Glenn's (1974) study of the Oneota people. Using cranial metrics and indices, Glenn compared Oneota remains to various populations, including Effigy Mound samples from Wisconsin and Iowa. The results of the statistical multivariate analysis show no strong relationship between the Oneota population and the Effigy Mound population (Glenn 1974:138). Glenn acknowledged that her research had several shortcomings. Buikstra (1978) offered a critical review of Glenn's study, noting some of the same problems: grouping geographically dispersed, small populations and assuming the groups are biological populations; incorporation of crania that had postmortem warping or were deformed; failure to maintain a constant technique through the study; no consideration of the effects of the small sample size relative to the statistical method used; use of statistical means rather than raw data; use of group means to fill in missing values, thus reducing group variability; the questionable utility of Neumann's "varietal" approach; and in both statistical and biological terms, the inadvisability of comparing "lumped" samples to samples from single sites. Additionally, it should be noted that Glenn's Iowa Effigy Mound sample came from 13AM105, the Hill Mound Group, and consisted of four deformed crania. Recent research (Schermer et al. 1998:142–146) shows only a general Woodland cultural affiliation for the human remains from this site.

A more recent biological distance study (Scherer 1998) examines the Oneota and their relationship to populations associated with the Effigy Mound culture, selected other Late Woodland groups, Middle Missouri groups, and the Aztalan site. The dental remains of over 250 individuals, from sites in Minnesota, Wisconsin, and Iowa (dental casts) were evaluated for 120 dental nonmetric traits. The Wisconsin Effigy Mound population was from the collections of the Milwaukee Public Museum and included some of the same individuals Glenn had examined. Dental morphology was chosen because of the poor condition of the cranial material from most of the sites examined. More importantly, dental morphology is relatively stable over time and resistant to changes caused by environmental factors (Scherer 1998:85). Scherer's results were similar to Glenn's, in that he found no biological relationship between the Oneota and Effigy Mound culture people. He did find that a "distinct biological continuity exists between the Late Woodland (Kathio), Effigy Mound, and Big Stone series examined," representing a shared ancestry, with potential gene flow between Effigy Mound culture and Late Woodland (Kathio) groups from Minnesota, and Big Stone as descendant relatives of Minnesota Woodland people (Scherer 1998:98). Scherer (1998:9) acknowledges some of the limitations of dental nonmetric studies, including dental attrition, antemortem tooth loss, dental caries, and culturally modified teeth. Additionally, Scherer (1998:85–87) recognizes his conclusion that no biological relationship exists between Oneota and Effigy Mound populations is based on skeletal collections similar to those used by Glenn and that Oneota may have arisen from a subgroup of Effigy Mound people not yet explored. Scherer's study also shares one of the problems encountered by Glenn: small sample sizes for some populations.

EFFIGY MOUND SKELETAL REMAINS

In the following section, the human skeletal material from Effigy Mound culture sites in Illinois, Minnesota, Wisconsin, and Iowa is reviewed briefly. Readers interested in detailed osteological information and relevant reports are directed to Myster and O'Connell (1997). Their chapters on Minnesota, Wisconsin, and Iowa provided the basis for much of the information presented here. Detailed inventories of Wisconsin Effigy Mound human skeletal remains were provided by the Milwaukee Public Museum.

Illinois

Information on Effigy Mound human skeletal remains in Illinois is sparse, with essentially no osteological data available. A synthesis of data on effigy mounds in Illinois (Boris 1984) includes site locations, current conditions of mounds, and very general descriptions of excavations. Boris's research included the attempted relocation of effigy mounds in northern Illinois, resulting in an expansion of the area containing known effigy mounds from the previously assumed limit of the northern tier of counties to the two northern tiers. Boris reported destruction of 88 percent of previously reported or mapped effigy mounds in northern Illinois. Her research also suggests a tie between the effigy mounds and rivers and water sources, as suggested by Goldstein (1995) for southern Wisconsin.

Minnesota

Effigy mounds in Minnesota are restricted to the southeast corner of the state, with nearly all the sites located along or near the Mississippi River at its junction with major tributaries (Anfinson 1984:Figs. 4a, 18). Information concerning human skeletal remains from Minnesota mound sites, synthesized in Myster and O'Connell (1997:215–229), documents 97 Woodland sites with known human skeletal remains. None are Early Woodland, 30 are Middle Woodland, 40 are Late Woodland, and the remainder are of unspecified Woodland affiliation. While 577 individuals are represented by remains from the Late Woodland mortuary components, little is known about "the biological nature of Late Woodland populations" (Myster and O'Connell 1997:222), and no mention is made of Effigy Mound culture skeletal material. Reportedly, none of this human skeletal material has been documented from Effigy Mounds affiliated sites (Barbara O'Connell, personal communication 2000).

A database of mound excavations and other American Indian burials in Minnesota has been developed using published and unpublished sources of information (Stevenson et al. 1999). Very few effigy mounds were excavated in Minnesota (Constance Arzigian, personal communication 1999). As of May 1999, only one effigy mound excavation had been entered into the database. A bird effigy at 21SC16 was salvaged during road construction but contained no human remains (Katherine Stevenson, personal communication 1999).

Wisconsin

Myster and O'Connell's (1997:193–195) synthesis of the bioarchaeology of the Effigy Mound skeletal material from Wisconsin notes that a minimum of 387 individuals from 29 Effigy Mound sites have been identified. This number comprises over 45 percent of all Late Woodland individuals identified for Wisconsin. "Despite the archeological interest in Effigy Mound mortuary sites, little bioarcheological information is known; consequently, the biological nature of the people comprising this widespread culture remains a mystery" (Myster and O'Connell 1997:197). Sporadic interest in bioanthropology in Wisconsin, while present early (e.g., Fisher 1928; Fisher et al. 1931; Merbs 1966), has involved relatively little Effigy Mound research

(Sullivan 1985, 1990; and see below). Many effigy mound sites produced sparse and poorly preserved remains and "sparse or missing excavation notes" (Myster and O'Connell 1997:193). Reporting of cranial and postcranial metrics, nonmetrics, and especially pathological conditions is limited. Cranial metrics for as many as 39 individuals have been reported (Myster and O'Connell 1997:193–194). This number is probably inflated, as there is some redundancy in the particular crania measured by different researchers.

A recent Ph.D. dissertation on Wisconsin Effigy Mound human skeletal material in the Milwaukee Public Museum collections attempts to deal with some of the analytical limitations imposed by such material (Ruth 1998). Ruth identified a minimum of 402 individuals represented by remains from 20 Effigy Mound sites. Due to the fragmentary nature of the cranial remains, no morphometric analysis or biological affiliation studies were attempted and no craniometrics were published. Osteological and bioarchaeological data are presented, including age and sex estimates, the distribution of burials by type and mound form, and paleopathological data. While the overall incidence of pathological conditions was low (7 percent, 15 individuals), the majority were attributable to osteoarthritis displayed in patterns suggestive of some level of agricultural activity (Ruth 1999:120, 159).

At least two basic assumptions in Ruth's study are questionable. Approximately two-thirds of the adult skeletons could not be sexed, and Ruth (1999:93) assumed that the unsexed skeletons had the same distribution as the sexed material, so that the overall Effigy Mound population, as well as each individual site, "comprised roughly equal numbers of males and females." Referring to the under-representation of subadult remains in the collection, Ruth (1999:97) concluded that "the most probable explanation for the absence of subadult skeletal material is that they were not included in the burial tradition." Since the Effigy Mound skeletal material from Wisconsin is generally in poor and fragmentary condition (Myster and O'Connell 1997:193), extrapolation of sex distribution based on only one-third of the total available adult skeletal material seems a bit of a leap of faith. Additionally, as noted earlier, Walker et al. (1988) found that subadults are underrepresented in poorly preserved skeletal collections.

Ann McMullen, former Curator of Anthropology at the Milwaukee Public Museum, provided a detailed osteological inventory of the Effigy Mound human skeletal remains housed there. The collections are the same as those studied by Ruth (1998) and Scherer (1998), although some are no longer available for examination. The inventories revealed that approximately four complete or nearly complete crania were available. The other crania were fragmented, incomplete, deformed, or had been reconstructed.

Iowa

A very limited amount of osteological data has been recorded for Iowa Effigy Mound human skeletal material. Several of the Iowa sites containing effigy mounds are multicomponent sites, a characteristic that might also apply to some of the Wisconsin sites. Some of the mounds are Early Woodland, some Middle Woodland, and some Late Woodland. Excavations and burials from these various components are included in the following description. Most of the human skeletal remains recovered from Effigy Mound sites in Iowa came from conical mounds (21 mounds). In addition, human remains were recovered from one linear mound, one bird effigy, and one bear effigy.

Most of the recorded excavations are from 10 sites within EFMO: 13AM82, 13AM101, 13AM113, 13AM163, 13AM189, 13AM190, 13AM206, 13AM207, 13CT18, and 13CT26 (see Chapter 3 and Appendix B, this report). Human skeletal remains were recovered during excavations in 17 mounds at eight of these sites (13AM82, 13AM101, 13AM189, 13AM190, 13AM206, 13AM207, 13CT18, and 13CT26), including skeletal material found in disturbed

contexts resulting from bioturbation or uncontrolled digging by vandals. Additionally, human skeletal material was recovered from unknown contexts in two mounds at 13AM190 (H. P. Field Donation from Mound 36 or 37 and EFMO collections from Mound 41) and from disturbed contexts at 13CT18.

While none of the skeletons is complete and some individuals are represented by only a few bones or bone fragments, limited bioanthropological information is available for the remains from EFMO sites. The burial context is not always known or well documented, but includes primary interments in the form of extended or flexed primary burials (3), secondary interments in the form of bundle burials (11), a cremated bundle burial (1), and other cremated remains (2). Some burials were found in subfloor pits enclosed by or covered with large rocks, such as Mound 33 at 13AM190. At least two burials in Mound 43 at 13CT18 were associated with red ochre, although two other burials in the same mound were not.

The described human skeletal material represents a minimum of 53 individuals, summarized in Chapter 3 and listed by site in Appendix B. Of these, 27 were adults, 15 were subadults, and 11 were of indeterminate age and sex. Six males or possible males and five females or possible females were identified. Subadult age estimates ranged from ca. 1.5 years to ca. 15 years. The pathological conditions reported include two cases of periostitis and one case each of osteoarthritis and porotic hyperostosis. The limited dental remains exhibited two carious lesions (two individuals), several enamel hypoplastic defects (two individuals affected), and one case of extreme tooth wear.

Three Iowa Effigy Mound sites outside of EFMO have documented human skeletal remains recovered during excavations at those sites. A bear effigy mound (Mound 1) at site 13AM81, Brazell's Island, was excavated by Ellison Orr and Mildred Mott in 1936 under the direction of Charles R. Keyes (Logan 1976:33–35; Mott 1936; Orr 1937b:111–122, 1942:54–55). A 60-ft-long by 5-ft-wide trench was excavated along the length of the body. A single bundle burial was found 3.5 ft. below the mound surface in the area of the shoulder. Fragmentary human skeletal remains in the Keyes Collection were from this burial (Schermer et al. 1998:120–122). An osteological analysis of the remains (Lillie n.d.) determined that one adult individual of indeterminate sex, 20 to 25 years old, is represented by a parietal fragment, an incomplete mandible, three long bone shaft fragments, and an innominate fragment. Each of three in situ mandibular molars displays one moderate occlusal carious lesion. A Madison Cord Impressed ceramic vessel in the Keyes Collection is associated with the remains, suggesting a Late Woodland Effigy Mound cultural affiliation for the burial.

Site 13AM69, Keller Mound Group, originally consisted of three bear effigies, five linear mounds, and 24 conical mounds. Ellison Orr's (1937a) 1912 excavations into two conical mounds, Mounds 2 and 5, resulted in the recovery of a few fragments of human bone. Salvage excavations (Benn et al. 1978, 1993) into three conical mounds (4, 23, and 29) impacted by road expansion in 1977 uncovered the incomplete remains of five individuals in Mound 4 and one in Mound 29 (Fisher 1978). These six individuals are believed to be associated with the Allamakee phase, transitional Middle Woodland to Late Woodland.

Turkey River Mounds, 13CT1, originally included one tailed effigy mound, eight linear mounds, two compound mounds each consisting of seven conjoined conicals, 20 individual conical mounds, and an enclosure. Archaeological excavations conducted in three conical mounds (Green 1988; McKusick 1964) uncovered human skeletal remains representing a minimum of 18 individuals (Green and Schermer 1988). Most of the remains from 13CT1 are associated with Early Woodland cultural contexts, but an Allamakee phase association is possible for two individuals.

Of the 53 individuals identified from mound burials within EFMO, thirty-two are from documented Middle Woodland cultural contexts: Mounds 55 and 57 at 13AM82, Mound 12 at 13AM101, Mound 33 at 13AM190, and Mounds 23 and 43 at 13CT18. The remaining potential Effigy Mound culture material from Iowa consists of 12 individuals, some from poorly documented cultural contexts. Only the remains from 13AM81 are still available for examination. (No cranial metrics could be taken on any of this material.)

DISCUSSION

Using the available human skeletal remains and published osteological data for biological affiliation studies of the Effigy Mound people is highly problematic. Current studies are hampered by small sample size, incomplete and poorly preserved remains, remains that were reconstructed or coated with varnish, commingled remains, and vague excavation records, resulting in differential data collection and variable utility for future studies.

The paucity of human skeletal remains from Effigy Mound contexts precludes using standard osteological approaches to investigate the biological affiliation of Effigy Mound populations. Of the 70 known effigy mound sites in Iowa (Table 4), only 10 have known burials or human remains associated with them. Eight of these sites are within Effigy Mounds National Monument. The available osteological material from Wisconsin and Iowa useful for biological affiliation studies, even when supplemented by published reports, falls far short of the recommended sample size of at least 100 individuals (Ubelaker 1989:131). Any attempt to use the Effigy Mound skeletal material must then deal with the problems inherent in working with small samples, such as the degree to which those samples are representative of the total population.

Biological distance studies use complete or nearly complete remains. Cranial remains were to have been examined for the present study. However, there are no complete skeletons and very few complete crania in any of the relevant osteological collections in Iowa or Wisconsin. Instead, the Effigy Mound skeletal material is often fragmentary, frequently poorly preserved, and some is burned. Poor preservation is the result of environmental conditions, such as high soil acidity, that act as decomposition agents on skeletal remains (Parsons 1962:5; Scherer 1998:7). It may also reflect mortuary behavior, such as the selection of interred elements and possibly breakage prior to burial. Subadult remains and those of older individuals are less likely to have survived in poorly preserved burials (Walker et al. 1988), and therefore are likely to be underrepresented. As a result, researchers might erroneously assume they were not part of the original mortuary population at Effigy Mound sites.

The burial types found within Effigy Mound contexts also create problems. In general, the cremated remains are not only fragmented, they are frequently warped and cracked. Exposure to heat may result in as much as 25 percent shrinkage of the affected bone (Ubelaker 1989:35). Bundle burials, not uncommon in mound interments, often represent multiple individuals. Although a minimum number of individuals can be determined, it is often impossible to associate particular skeletal elements with a specific individual. Without careful excavation records, it may not be possible to determine if a particular burial is from an original Effigy Mound context or is an intrusive interment from a later, unrelated group. Just because a mound site contains effigy mounds, not all the mounds necessarily were constructed or used by Effigy Mound people. As discussed earlier, some of the Iowa sites considered to be Effigy Mound culture contain Early Woodland and Middle Woodland mounds and burials.

Two underlying assumptions of biological affiliation studies are that the population under examination is biologically homogenous and that the sample is representative of the population from which it is drawn. These assumptions about the Effigy Mound people lie at the core of previously published reports. Glenn (1974), Scherer (1998), and Ruth (1998) all assumed, for the

purpose of their research, that the Effigy Mound human skeletal remains they examined derived from the same biological population. Given the small, fragmented samples that have been studied, it is difficult if not impossible to know if the individuals buried in the mounds are representative of the populations from which they derive. A shared complex of cultural traits does not equate to a shared biology. Given the temporal and spatial distribution of the Effigy Mound culture complex in the upper Midwest and the current absence of any known associated cemeteries outside of the mound burials, it appears there may be too many assumptions required to allow for a confident grouping of all Effigy Mound people into one biologically discrete unit. The limited, fragmented, poorly preserved nature of most of the Effigy Mound human skeletal material seems to preclude any attempt to make generalizations about the material "as a whole."

The two major biological affiliation studies to date that incorporated osteological data from Effigy Mound population samples (Glenn 1974; Scherer 1998) both came to the conclusion that there is no biological connection between the Effigy Mound population and the Oneota. Some researchers (e.g., Benn 1979; Hurley 1974) have reached this same conclusion based on archaeological data, while others (e.g., Rodell 1997; Stoltman 1986a; Theler and Boszhardt 2000) see the archaeological record as indicating transformation of Effigy Mound populations into Oneota (see Chapter 8, this report). Since it is not possible to determine, or even estimate, if the Effigy Mound culture represents one or more Effigy Mound biological populations, the biological affiliation of the Effigy Mound people remains an unanswered question.

Bioarchaeological data are not, by any means, absent and may eventually tell us more about who the Effigy Mound people were; DNA analysis of Effigy Mound human skeletal material from well-documented contexts may provide some insight into who they "became." Ideally, if the data were available, regionally focused rather than broad-based studies might reveal distinctions between Effigy Mound people. For example, Goldstein's (1995) examination of mortuary contexts provides insight into Effigy Mound social organization in southeast Wisconsin. Studies such as Ruth's (1998) that incorporate and add to the bioarchaeological data on the Wisconsin Effigy Mound skeletal collections, particularly paleopathological observations, are essential to the understanding of the Effigy Mound people.

Chapter 8. Changing Interpretations of Effigy Mound Ages, Origins, and Cultural Affiliations

by William Green

HISTORICAL REVIEW

Efforts to determine the cultural affiliations of archaeological remains are not new to NAGPRA or even to recent decades. As noted in Chapter 4, Wedel (1938) and others developed and applied the Direct Historical Approach in American archaeology for the express purpose of linking known tribal groups to archaeological complexes. And even earlier, archaeologists and antiquarians attempted to understand the historical meanings of mounds and other ancient features by assessing their apparent links with the Indian peoples of the day. These previous efforts at making historical connections are of importance to current work on cultural affiliation because they have set the conscious and unconscious frameworks within or against which we develop our current approaches. Therefore, this chapter reviews past interpretations of effigy mound ages, origins, and cultural affiliations, and, based on examination of these interpretations, it also presents a model that can help address current interests in these questions.

Throughout the 19th century, debates flared regarding the builders of the North American mounds: were the mound builders ancestors of the Indians or were they members of a lost race, perhaps driven to extinction by the Indians (Birmingham and Eisenberg 2000; Kennedy 1994; Mallam 1976b; Silverberg 1968)? This was, of course, a critical question, but Western thinkers had to resolve a more significant conceptual dilemma even before questions of mound authorship arose. In the 16th and 17th centuries, Europeans struggled to reconcile the cultural and geographical facts of the New World with an epistemology that precluded non-Biblical explanations of natural and human phenomena (Huddleston 1967). Those first centuries of contact saw perhaps "the most significant clash of Long-Held and Cherished Beliefs with the Inexplicable and Unwelcome New in human history"—on both the European and Native sides (Henige 1982b:398). By the 19th century, the facts of Indian existence had been explained by a variety of means, including common attribution to the Lost Tribes of Israel (Wauchope 1962). Therefore, when confronted with the extensive time depth suggested by the mounds, many Americans, including the earliest surveyors of effigy mounds, were able to believe Indians had built the mounds, although they believed the mound-building Indians clearly belonged to antiquity and probably were not directly related to the contemporary Indians of the region. Because many writers saw the Indians as descendents of the Lost Tribes of Israel, mound-building was viewed as compatible with those societies' undoubted sophistication—even though the practice had been abandoned by contemporary Indians.

During much of the 19th century, however, the question of mound-builder identity became too important to be answered by vague allusions to long-gone Indians. The issue of who had occupied and modified the ancient American landscape—Indian or non-Indian, and if non-Indian, then who?—developed into a national debate that spurred intense study of mounds as well as much speculation. Some writers believed in the mounds' Indian origin. But in an atmosphere shaped by the ideology of Manifest Destiny and the practice of Indian removal, a non-Indian origin of the mounds constituted an appealing national myth. If the Indians had driven the Mound Builders to

extinction, so much the better, for it proved the incompatibility of Indians with "civilized" society (see, e.g., Mallam 1976b; Silverberg 1968).

During the search for the mound builders, effigy mounds of the Upper Midwest received nearly as much attention as the geometric earthworks and monumental earthen architecture of the Ohio Valley. Their "emblematic" shapes begged for interpretation, and 19th-century authors embraced the challenge. A sampling of this literature shows that attempts at understanding the origins and meanings of effigy mounds ranged from the rational to the bizarre and racist. Despite the prevailing and profound uncertainty of the possible antiquity of the human presence in North America and thus of the ages of the mounds, the more serious of the mid-19th century thinkers still attempted to address the question logically.

Perhaps the earliest recorded native explanation of Wisconsin mounds was that reported by frontier traveler Pliny Warriner. Finding himself among a small group of Winnebagos in 1828, Warriner watched them ascend the highest mound of a "series of regularly ranged mounds, conveying to the distant eye the appearance of a formal town" (Warriner 1855:88). This mound group was situated along the shore of a lake, probably Lake Butte des Morts in eastern Wisconsin. The elderly Winnebago leader reportedly told Warriner that no Winnebago had "ever disclosed to the whites the origin of the mounds you see around us" (ibid.). After describing a battle between the Winnebagos and the Meskwakis, he said, "The mounds you see were raised, each over the grave of some renowned chief, who fell in the great battle here" (Warriner 1855:92). The battle to which the Winnebago elder referred probably occurred in the 1600s or early 1700s (see Chapter 5, this report), and the tradition is responsible for the place name. A similar tradition stated that the two large mounds at Butte des Morts "were erected over the bodies of Fox warriors who had been killed in a battle with the Iroquois" (West 1907:177), probably in the 1600s or 1700s. Indians therefore reportedly attributed these eastern Wisconsin conical mounds to historical events of the preceding 100–200 years and, at least in part, to non-Winnebagos.

The Ioway Indians supplied another of the very few early-19th-century native descriptions of midwestern mounds. An 1836 Ioway land claim petition stated, as proof that the tribe had lived in the region for hundreds of years:

> Search at the mouth of the Upper Ioway River, (which has been the name of their Nation time out of mind) there see their dirt lodges, or Houses, the Mounds and remains of which are all plain to be seen, even at this day… [Blaine 1979:164]

Large, conical burial mounds resemble earth lodges of the Plains in outward form. This statement thus seems to identify conical mounds as earth lodge locations. Yet the regional archaeological evidence shows that (1) conical mounds served mortuary, not domestic, functions, and (2) the Ioways lived in longhouses, not earth lodges, when they lived in the Upper Mississippi valley (Hollinger 1997). Interestingly, the Winnebagos claim to have built earth lodges in Wisconsin as late as 1860 (Radin 1911:531–532), although no archaeological evidence has been found, and the Ioways lived in the 1830s in the Missouri valley among tribes who had built earth lodges for many generations, and they may have built such dwellings themselves at that time. Both the 1828 Winnebago explanation and the 1836 Ioway petition thus indicate that mounds, particularly conical mounds, fostered Chiwere identification with significant landscape features and events, even though the actual ages and functions of the mounds were interpreted in recent and familiar terms.

Other early- to mid-19th century documents report no mound-related legends or native explanations of any kind for the mounds. John Locke in 1839 found that "the present aborigines are as ignorant as ourselves" (Locke 1844:168) in respect to the origin of the effigy mounds. Likewise, Richard Taylor quoted a published report, probably from 1837 or early 1838, as stating that in regard to the mounds that resemble "lizards, turtles, buffaloes, and even human forms," the present Indians are "entirely unable to give any account of these remains, or to furnish the slightest tradition regarding the ancient possessors of the soil" (Taylor 1838:95–96). Still, despite his inability to find Indian traditions regarding the mounds, Taylor referred to midwestern mounds as "Indian mounds," although he believed they were built in an ancient era by Indians not directly related to those who still lived in the region. Taylor saw in the effigy mounds a reflection of the tendency among Indians and, indeed, all peoples, to use animals and animal shapes as badges or symbols of achievement or, more commonly, of group identity. Viewing "these ancient memorials of a by-gone people" as "commemorative of the dead," Taylor thought that effigy mounds "may have served in some way to designate the respective tribes or branches to which the deceased, in whose honor the structures were reared, belonged" (Taylor 1838:100). Admitting that he had no "positive evidence to show, that any existing tribes or branches… actually did erect monuments of earth in the shape of animals whose names they bear," he noted that the widespread Indian use of animals such as the fox, turtle, bear, and birds to designate subdivisions ("branches": bands or clans), could be found among "the Winnebagos, like the Algonquin, and other tribes" (Taylor 1838:104). Taylor believed the "ancient" and "by-gone" Indians who built the mounds also maintained such tribal subdivisions and that the burial mounds "which resemble certain animal figures, were in fact designed as representations of those national or family badges, and consequently pointed out the burial place of the members of those particular tribes" (ibid.).

Several other writers of the era also espoused this viewpoint. For example, Henry Rowe Schoolcraft, who conducted decades of research among and about Indians, believed firmly that the ancient American mounds had been built by ancestors of the Indians, not by a lost race (Silverberg 1968:105). Schoolcraft knew of no Indian traditions regarding the effigy mounds specifically, but he endorsed the essential commemorative-totemic interpretation Taylor had expressed. Consideration of the purpose of effigy mounds led Schoolcraft to write:

> Their connection with the existing Totemic system of the Indians who are yet on the field of action is too strong to escape attention… A tribe could leave no more permanent trace of an esteemed sachem or honored individual than by the erection of one of these monuments. They are clearly sepulchural, and have no other object, but to preserve the names of distinguished actors in their history. The FOX, the BEAR, the WOLF, and the EAGLE, are clearly recognizable in the devices published. [Schoolcraft 1851:52–53; emphasis in original]

Mound surveyor Stephen Taylor also asked Indians about the mounds. Receiving no satisfactory answers, he reported on

> … the fact of the non-existence of tradition among the present generation of the Indian race, by which we can have the least hope of unraveling the mystery [of the mounds' origin]. This matter I have made a subject of inquiry whenever meeting with an intelligent, communicative Indian, and I have found that the various tribes which inhabit this section of the country, express total ignorance on the subject of the origin of the mounds; some however are impressed with a belief, founded upon their superstitious notions, that those in the form of animals were constructed by the "great Manitou"—that they are indicative of plentiful

supplies of game in the world of spirits; they are, therefore, looked upon with reverence, and are seldom molested by them. Tribes and even bands differ in their conjectures with regard to them. [Taylor 1843:22]

He declined to give a "conclusive opinion" on the mounds, "as there have already been too many wild speculations" (Taylor 1843:40). He determined that the mound question, while one of "Indian archeology," was a mystery: "We know not whence they came—we know not where nor how they have departed. A people as passed—a nation has gone away—their history we know not, nor the history of their works" (ibid.).

Lapham likewise could obtain no answers from Indians regarding mound origins or meanings. However, he was not surprised that he encountered no evidence of traditions regarding the mounds among Wisconsin Indians since he concluded they "had no traditions running back as far as" the 1600s (1855:90). Lapham perceived many types of links between the mound builders and the Indians of his era, convincing him that "the mound-builders of Wisconsin were none others than the ancestors of the present tribes of Indians" (ibid.). Still, he believed a great span of time might have elapsed since most of the mounds were built, and he suggested that the Indians who built most of the mounds might "have emigrated, or been driven off by others having no veneration for their ancient monuments" (1855:89). This viewpoint, compatible with the interpretations of the Taylors and Schoolcraft, differs importantly from the Lost Race myth in its attribution of the mounds to Indians, albeit ancient or departed Indians. Lapham's, Schoolcraft's, and the Taylors' conclusions are in fact compatible with current beliefs that mound-building societies of 1,000 or 2,000 years ago represent different Indian *cultures* than those of today's Indian groups, even if ideological similarities or links of other kinds exist.

Soon after Lapham's monograph was published, Samuel Haven (1856) considered the broad questions of the nature of North America's prehistoric inhabitants and the authorship of American antiquities. His encyclopedic coverage of the literature led him to conclude that the ancient Americans had entered the continent from Asia in remote times, "before the existing institutions and national divisions of the parent country were developed," precluding the possibility that they could represent the Lost Tribes of Israel or some other Old World civilization. Archaeology as well as linguistics and physical anthropology ("philological and physiological" investigations) proved to Haven that "the American races are of great antiquity. Their religious doctrines, their superstitions, both in their nature and in their modes of practice, and their arts, accord with those of the most primitive age of mankind" (Haven 1856:158, 159). To Haven, it was fully plausible to attribute the mounds in general to ancestors of Indians rather than to lost races (Mallam 1976b:158–159), although even he was baffled by the effigy mounds, noting their origin was "involved in equal obscurity" as the Ohio earthworks (Haven 1856:158).

Haven's, Lapham's, and Schoolcraft's works—thoroughly researched and thoughtful, cautious in their conclusions, and disseminated by prestigious publishers—had little apparent effect on the national Mound Builder debate. Other mid-19th century writers spun Lost Race yarns of great mass appeal during that era of Indian removal and Indian wars (Mallam 1976b; Silverberg 1968). The popular literature abounded with Lost Race speculations. William Pidgeon's *Traditions of De-coo-dah and Antiquarian Researches* (1853) was especially influential and is of particular relevance to the effigy mounds (see Silverberg 1968:135–151). Not only does Pidgeon's book include ostensible maps of many effigy mound sites, but it purports to interpret the history of the effigy mound builders on the basis of oral tradition supplied directly to the author. Pidgeon believed that:

it does not appear possible that any better key [to the mound-builders' history] can be obtained than that afforded by tradition. The successors of the mound-builders, either more or less remotely, were the North American Indians. Through them, it should be possible to discover any traditionary history. There might be a dim and uncertain, but still a welcome light thrown into the darkness of that oblivion which has hitherto enveloped the men who built the great works of the Scioto, Miami, and Mississippi valleys. And such traditions do exist. [Pidgeon 1853:5–6]

Pidgeon reported that in the 1830s and 1840s he visited around 400 mounds in the Upper Mississippi Valley, digging into many mounds of all sorts in what is now Wisconsin, Iowa, and Minnesota. He apparently took no care to make accurate maps or descriptions of the sites or their contents. Nearly all of Pidgeon's effigy mound maps and site-specific data were discredited by subsequent workers who tried to but could not confirm the existence of most of Pidgeon's sites or who found Pidgeon's maps and descriptions to be grossly inaccurate and misleading (Lewis 1886a, 1886b; Peet 1893:xix).

It was the history of the mound-builders that Pidgeon supposedly obtained from De-coo-dah that formed the core of his book and the basis for his speculations on effigy mounds and on the ancient history of the Mississippi Valley. Pidgeon stated that he had recorded stories and obtained explanations of mound types from an individual named De-coo-dah, to whom he was introduced in 1840 by the notable Winnebago leader Waukon Decorah near Capoli Bluff, in Allamakee County, Iowa. De-coo-dah's stories concerned an ancient mound-builder nation, the Elk Nation, and its migrations, battles with other peoples, spin-off groups, and ultimate demise. De-coo-dah reportedly identified for Pidgeon various functions for mound building, including effigy mound construction. As De-coo-dah (conveniently) was the only living person with traditions of the Elk Nation, it was not possible for any other researcher to contest the stories or the history.

The lesson Pidgeon drew from the Elk Nation's history surely resonated with many Lost-Race enthusiasts: he attributed "the extinction of the mound-builders" to "an unnatural amalgamation of distinct races" (Pidgeon 1853:325) and professed that similar results ensue from race-mixing everywhere. In a classic application of the Lost-Race ideology, Pidgeon was able to honor the ancient civilization that built the mounds by recording its history from its last surviving descendant. This history not only accounted for everything about the mounds but also ascribed the civilized Elk Nation's passing to the Indians who had themselves just been removed from the mound district.

Although Pidgeon's book was popular, it received no scholarly approbation for a generation. However, historians began citing it in the 1870s and 1880s, leading T. H. Lewis to challenge and discount the stories De-coo-dah allegedly told to Pidgeon, just as he disputed Pidgeon's archaeological information:

I have visited and critically examined other localities described by our author [Pidgeon] in south-western Wisconsin and north-eastern Iowa, and in addition have made many inquiries, of old settlers, concerning him and his claims. At Trempeleau, Wisconsin, I talked with the daughter of his one-time host, the Kentuckian who had a squaw wife. The result of all my researches in this respect is to convince me that the Elk nation and its last prophet De-coo-dah are modern myths, which have never had any objective existence; and that, consequently, the ancient history in the volume is of no more account than that of the Lost Tribes in the Book of Mormon. [Lewis 1886a:69]

Lewis himself might not be completely reliable on all counts (see the discussion of the Harpers Ferry Great Group, Chapter 6, this report), but he was among the most careful and conscientious of the region's 19ᵗʰ-century researchers. His inability to confirm Pidgeon's stories and mound data cast a significant pall over any further scholarly use of Pidgeon's work, including the interpretations of effigy mounds as historical records of the Elk Nation. As we will note later, however, at least one archaeologist today believes Pidgeon's De-coo-dah stories may constitute not only a native oral tradition but a plausible scenario of prehistory that accords with the regional archaeological record.

"By 1880 the Mound Builder myth had reached its zenith" in popular American consciousness (Mallam 1976b:162; see also Silverberg 1968). But during the 1880s, with the Smithsonian Institution issuing preliminary reports on its mound survey (Thomas 1887a, 1887b), sober mound researchers reaffirmed their belief in Indian authorship of the mounds, albeit Indians who were more industrious than the modern tribes. For example, Wisconsin antiquarian P.R. Hoy, like Lapham and the Taylors before him, argued that "the 'mound-builders' were Indians and nothing but Indians, the immediate ancestors of the present tribes as well as many other Indians that formerly were scattered across this country" (Hoy 1885:100). Echoing Lapham, he reasoned that the lack of Indian tradition regarding the mounds did not mean the mounds must have been built by some lost race. Instead, the fact that Indians did not claim to have built the mounds differed little from their reportedly widespread assertion that "they had never made flint arrowheads, stone axes or pottery, and that these things must have been made by some one else" (Hoy 1885:90). To Hoy, such claims indicated simply the limits of oral history, not the presence of a former race of Mound Builders.

Ethnographic accounts of Sioux and Winnebago ceremonies at this time, while revealing nothing specifically about effigy mounds, fueled later suggestions of a Winnebago–effigy mound connection. Working among Sioux and Winnebago people in the early 1880s, Alice Fletcher recorded the construction of tiny flat-topped mounds as part of sacred dances. Fletcher noted that the Buffalo dance of the Winnebago, held during the War-bundle feast, was held within a long, narrow shelter or "dance tent."

> As the dancers enter, each woman brings in a handful of fine earth and in this way two mounds are raised in the centre at the east, that is between the eastern entrance and the fire, which is about fifteen feet from the eastern entrance. The mounds thus formed are truncated cones. An old man said to me "That is the way all mounds were built; that is why we build so for the buffalo." The mounds were about four inches high and not far from eighteen inches in diameter. On top of the two mounds were placed the head-gear worn by the men, the claws, tails and other articles used by the four leaders, or male dancers. [Fletcher 1884:396]

Another small mound was created when the ashes from the fire were "raised in a sharp conical mound." To Fletcher, these small mounds "remind one of larger structures and suggest many speculations… suggesting hints of a peculiar past" (Fletcher 1884:397). Fletcher never saw these mounds made in effigy shapes, however (West 1907:251).

Stephen Peet not only saw direct links between Indians and mounds, he argued in favor of a specific connection between Siouan peoples and effigy mounds. Adapting Thomas's core question about mounds in general (Thomas 1887b:15), Peet asked, "Were the emblematic Mound Builders, Indians?" and replied, "The answer to this depends upon the definition which we give to the terms… What Mound Builders and what Indians?" (Peet 1893:148–149). For example, Peet believed that the huge Ohio earthworks had been built by people unrelated to the "rude,

uncultivated people… incapable of erecting these works," who lived in that area in recent times. But the same was not true of the effigy mound builders:

> …the people who erected them were so similar in their habits and modes of life to the tribes which occupied the region at the opening of history, that we have no hesitation in saying that they were hunters as well as agriculturalists, and that the hunting habits of the later races furnish good illustrations of the customs which prevailed among them. [Peet 1893:149]

> The effigies were undoubtedly imitations of the wild animals which were once common in the region but they are at the same time totemic in their character and may be supposed to represent many things in the clan life of the people. [Peet 1893:vii]

Peet cited approvingly the clan-symbol ("totem") theory of R. Taylor for the effigies (Peet 1893:xviii) and concluded his book on effigy mounds with a "Comparison of the Effigy-Builders with the Modern Indians." This treatment considered: (1) the spatial extent of effigy mounds and historic tribes, (2) the religious systems of the effigy mound builders and historic tribes, (3) similarities between effigies as "picture-writing" and historic tribes' pictographic record-keeping, and (4) "clan habitats" of the effigy mound builders in relation to those of modern tribes. Undoubtedly influenced by James Owen Dorsey's articles on Siouan languages, myths, and migrations that Peet published in *The American Antiquarian*, Peet concluded that the Winnebago and other Dakota-related tribes evinced connections with the effigy mound builders in all four respects. He distinguished the Dakota tribes' history and practices from those of the Algonquian tribes, concluding that it is "probable that this wide-spread stock [i.e., Dakota] were the actual effigy builders" (Peet 1893:376). Peet used the term Dakota to refer at least to people who spoke the Winnebago-Chiwere, Dhegihan, and Dakotan languages, the constituents of the Mississippi Valley Siouan language group (Rankin 1997) and the apparent descendants of the Proto-Central Siouan language (Springer and Witkowski 1982; Syms 1982). Peet's "Dakota" thus would include at least 14 Siouan-speaking tribes. Yet because of the mounds' evident antiquity and because of prevailing attitudes toward Indians, Peet did not shed his unwillingness to see any particular modern tribe or tribes within the Dakota "stock" as the effigy mound builders:

> We are convinced that great changes have occurred since the mound-building age. If the ancestors of the Indians were the Mound-builders, as many claim that they were [and as Peet argued in the preceding 23 pages of his book], the Indians have degenerated and their former state may be better learned from the study of the effigies than from the tribes that are still living. [Peet 1893:398]

Although Peet could not identify any specific descendants of the effigy mound builders, he was able to recognize what he believed were particular clans and clan territories on the basis of the distribution of predominant mound forms. Using Thomas' (1891) Wisconsin mound distribution map as a base map, Peet divided the effigy mound region into 13 zones, each supposedly dominated by a particular mound form (Peet 1893:396–398). The southwestern Driftless Area and adjacent Clayton County, Iowa, for example, was deemed the Bear mound (and, thus, Bear clan) territory. North of the Wisconsin River, the Allamakee, Crawford, and Vernon County region was identified as that of the Swallow (swept-wing bird effigy) mound and clan. Clan territories often coincided with river valleys. Peet recognized that the clan archetype was not the exclusive mound type within a territory, but he was convinced that through study of

prevailing mound forms he had identified the territories of each of the clans that composed the effigy mound "tribe."

The Smithsonian's mound survey report was the most conclusive and influential of the 19th-century efforts to identify the mound builders. By conducting their work expressly to test the Lost Race theory, by crushing that theory through amassing evidence of Indian authorship of the mounds, and by publishing their results widely (Thomas 1887a, 1887b, 1891, 1894), Thomas and colleagues changed how most Americans thought about mounds and Indians. "The links directly connecting the Indians and mound-builders are so numerous and well established that archaeologists are justified in accepting the theory that they are one and the same people" (Thomas 1894:17). Timing is everything, though. By 1890, the frontier was essentially closed, the Indians were defeated and "no longer represented a threat to American expansionist policies," and so "America was emotionally ready to accept the fact that the Indian was another cultural being… [T]his readiness coincided with Thomas' report on the investigations of the Division of Mound Exploration" (Mallam 1976b:170; see Birmingham and Eisenberg 2000).

Thomas weighed in on the subject of identifying the effigy mound builders in the lengthy concluding section of his final report. Having demonstrated to his satisfaction that Indians had built the conical burial mounds, Thomas believed that the effigy mounds "are too intimately connected" with the conicals to have been built by a separate race. He recognized that conicals and effigies were two elements "of what is clearly a system," i.e., systematically organized mound groups that contained both types of mounds. Therefore, Thomas ascribed effigy mound construction to the same people who built the conicals, i.e., Indians (Thomas 1894:709). He hesitated to make more specific identifications: "To what particular tribes the ancient works of this northwestern section [the Upper Mississippi valley] are to be attributed is of course a question which must be answered chiefly by conjecture." Yet he thought he could identify the general group responsible for the effigy mounds: "…there are some good reasons for believing that the effigy mounds and those works belonging to the same system are attributable to one or more tribes of the Siouan stock… [T]here is no longer any substantial reason for denying that the effigies and other works thereto are due to the Siouan tribes" (Thomas 1894:709–710). The main reasons were the apparently relatively recent age of the effigy mounds in an area known to have contained Siouan-speaking tribes at contact, as well as similarities between effigy mound forms and "the comparatively modern surface figures of the Siouan tribes" (ibid.), i.e., the effigy petroforms or "bowlder mosaics" of the northern Great Plains that Thomas assumed were built recently by Siouan peoples (Thomas 1894:534–535). Thomas and Peet thus came to similar conclusions on the identity of the effigy mound builders, not surprisingly in view of their association in the 1880s and their frequent citations of the other's work.

Between about 1900 and 1920, the interpretations of effigy mounds that prevailed in the anthropological community were shaped by Thomas, Peet, and their forebears as well as: (1) data collected by the expanding archaeological survey work of C. E. Brown and his teams, and (2) heightened ethnographic interest in Wisconsin Indians. The consensus reached during that era was more specific than Peet's and Thomas's conclusions. Rather than attributing the effigy mounds to the general Siouan "stock," early 20th-century archaeological and ethnological researchers, most notably Paul Radin, favored specific identification of the Winnebagos (Ho-Chunks) as the effigy mound builders. Birmingham and Eisenberg (2000) provide details on the research and interpretations that led to these conclusions, so we supply only a brief summary here.

Lawson's comprehensive study of Winnebago history, upon which Radin and others relied, had noted as late as 1907 that the Winnebagos and Dakotas apparently had no tradition of effigy mound construction and that the Winnebago "when questioned could give no information"

concerning the effigy mounds (Lawson 1907:160). Soon thereafter, however, other researchers published influential papers favoring Winnebago authorship of the effigy mounds: George A. West (1907), Arlow B. Stout (1910-11, 1911), Paul Radin (1911, 1923), and Charles E. Brown (1911). A later contribution by Frances Densmore (1928) also belongs to this group. Essentially, these writers concluded for four reasons that the Winnebagos built the effigy mounds (Birmingham and Eisenberg 2000): (1) ethnographic evidence of burial ceremonies indicated that the Algonquian newcomers to Wisconsin did not build effigy mounds, and since the Dakota had left the region in the early Historic period, that left the Winnebago as the effigy builders by default; (2) general geographic accordance of effigy mound distribution with historic Winnebago occupation locales; (3) similarities between mound forms and Winnebago clan symbols, as tribal informants noted; and (4) the mounds' recent age in light of informants' claims that their ancestors had built them recently, supporting point number 1. The first two arguments had been made earlier, so the Winnebago interpretations of the mounds' forms and functions and the Winnebago claims of authorship were the most important elements of these authors' analyses.

As of 1907, West—unable as Lawson was to cite specific Winnebago information on the effigy mounds—believed that the Siouan and probable Winnebago authorship of the effigy mounds was not only a well founded hypothesis but one he predicted "would be accepted as undisputed fact, within the present generation" (West 1907:253). In 1910, Stout reported a Winnebago individual told him: "Yes, Indians use to build mounds. Our Winnebago people did. They built many round mounds for burial" (Stout 1910-11:101). Unable initially to explain or interpret an effigy mound, Stout's informant later stated that it represented an underwater spirit animal and that "Indians built these animal mounds too" (Stout 1910-11:102), although he did not say specifically that the Winnebagos had built such mounds. Still, Stout believed this evidence "supports the view that the Winnebago built both conical and effigy mounds and that the latter were built in connection with the totem system or organization" (ibid.).

Seeking native information about effigy mounds, Radin reported that the Dhegiha and Chiwere people with whom he spoke "declared that they knew only of conical mounds and that their knowledge of even these was vague," although he cautioned that "no systematic interrogations" of them had been made (Radin 1911:523). But during his ethnographic field work among the Winnebagos from 1908 to 1913, he was told at some point that:

> it had been customary not very long ago to erect near the habitation of each clan an effigy of their clan animal. Subsequently, upon more systematic inquiry, it was discovered that not only were such effigy mounds erected near clan habitations, but also on every plantation owned by a certain clan. In other words, these effigies were, to all intents and purposes, property marks. [Radin 1911:525]

(This statement is reminiscent of the large number of effigy mounds adjacent to or crossed over by native planting ridges; Birmingham and Eisenberg 2000; Lapham 1855.)

Radin saw most of the Winnebago clans, along with the water spirit, represented in the effigies. Also, two elders reportedly identified the "man" mound figures as "representations of the warrior or hawk clan" (Radin 1911:528). Anticipating an objection to this interpretation, he noted:

> Only one possible adverse criticism could possibly be made and that would be to regard the above as a folk explanation. But, if we accept the explanations of the other effigy mounds as justified, then we will have to accept this explanation likewise. [ibid.]

Radin could obtain no information about the intaglios, but he surmised that they were meant to refer to water spirits because most of them were so shaped and because "the Winnebago frequently placed symbols referring to water deities under water" (ibid.). Radin's informants claimed that linear mounds "had been erected by their ancestors, some even within the memory of their fathers," with defensive works being the most commonly cited function but with lodge foundations and snake effigies also suggested (Radin 1911:530–531). Likewise, Radin reported that Winnebagos claimed the composite or compound mounds served as bases for lodges with connections between them, and that conical mounds had numerous uses in addition to their main use for burial of chiefs (Radin 1911:533).

Although not cited in his arguments for Winnebago mound construction, Radin observed ceremonial use of small mounds in the Buffalo dance (Radin 1923:298–299), similar to Fletcher's (1884) account. He also observed use of a small mound inside the Bear dance lodge, a mound that "is supposed to represent a bear's cave" (Radin 1923:299). Radin's record of the origin myth of the Medicine lodge mentions an earth mound in front of the Thunderbird chief's house but does not state its shape or purpose (Radin 1923:306).

Brown (1911) reported on a visit with two of Radin's Winnebago informants, Oliver Lamere and John Rave, in 1911. Mr. Rave agreed with Brown's identification of a bear mound as representing the bear, and he believed some bird effigy mounds represented the thunder bird, although "he thought it likely that some other bird mounds were built to represent the now extinct Winnebago pigeon and hawk clans" (Brown 1911:126). Mr. Rave identified the long-tailed panther mounds as "representative of the Winnebago 'water spirit'" (ibid.). Regarding effigy mounds in general, Mr. Rave told Brown: "An old Indian told me that his father used to tell him that the totem mounds would be placed in their fields that they would plant" (Brown 1911:128). Upon viewing a map of a crossed pair of linear mounds, Mr. Rave "without any hesitation pronounced the cross to be in all probability intended to represent the Winnebago symbol of the "Earth-Maker"" (ibid.). Regarding conical mounds, Mr. Rave "stated that according to the information which had come down to him thru several generations of relatives the Winnebago in the early days of their life in Wisconsin erected just such structures for purposes of interment" (Brown 1911:127).

W. C. McKern rebutted Radin's and Brown's conclusions that the Winnebagos had built the effigy mounds. To begin, McKern alleged that Radin himself was the (or a) source for the Winnebago belief that they had built the effigy mounds:

> One thing is certain; Radin thoroughly convinced many of the Winnebago that their ancestors built the mounds. Since his sojourn in their midst, they have talked the matter over at length and are now quite proud of these, the supposed products of their forbears… Not a few actually quote Radin for their authority. [McKern 1928b:277]

McKern reported hearing several explanations of effigy mounds "from the lips of young, middle-aged, and old Winnebago. Some of these informants actually quoted Radin as the authority for their statements" (McKern 1929:563). James B. Griffin recalled McKern telling him the same thing: "When McKern asked the people with whom Radin had worked how they knew their ancestors had built the effigy mounds they replied that Radin told him that was the case" (Griffin 1995:15–16). Winnebago claims for effigy mound authorship do not appear until 1910 or 1911, after Radin had already spent two years working with the Winnebagos. Recognizing the paucity of early, documented Winnebago claims for effigy mound authorship, Staeck recently

argued that "the Ho-Chunk consider the purpose of mound construction to be sacred knowledge that is not to be shared with outsiders" (Staeck 1998a), yet Radin's and Brown's informants apparently were willing to share their opinions and interpretations of mound functions as well as many other sacred subjects. Radin does not appear to have replied to McKern's charges, at least in print. The accusations against Radin do not allege that he deliberately set out to convince the Winnebagos that they had built the effigy mounds, nor do they suggest that all of his ethnographic records and interpretations are unreliable or unusable, but that his sense of native history, both of the group and of individual lives, seems to have been guided by preconceptions, literary inclinations and license, and mutual manipulations of and by his informants (Burnham 1998; Krupat 1985:80–106; C. Mason 1993a).

Beyond Radin's possible influence upon his informants, McKern (1928b:276–288; 1929) urged caution in tribal attribution of the effigy mounds for other reasons: locations of effigy mounds and Winnebago occupation loci often do not correspond; some mound forms cannot be identified as Winnebago clan symbols; the claimed purposes of some mound forms are contradicted by archaeological evidence; historical memory to the era of mound building is suspect and in some cases demonstrably incorrect; members of other tribes have claimed authorship of the mounds; pottery of the effigy mound builders is "Algonkin" or "Lake Michigan" rather than Winnebago; and mortuary customs of several other tribes are more congruous with effigy mound burial practices than are those of the Winnebago. At first, McKern did not claim to have shown that the Winnebagos did not build the effigy mounds, just to have shown

> that there is a considerable quantity of carefully collected archaeological data bearing directly on this problem, which must seriously be taken into consideration before the question is disposed of on the basis of quite contradictory evidence obtained from living Indians, and that these data in no way tend to support any of the explanations of purpose and use advanced by Winnebago informants. [McKern 1929:564]

McKern's continued identification, classification, and seriation of the various prehistoric cultures of Wisconsin soon led him to not only challenge Radin's identification of the Winnebagos as the effigy mound builders but to supply archaeological evidence that a different, non-Winnebago group built the effigies. McKern identified constellations of traits that defined, among other units, the Effigy Mound and Oneota aspects, two very different archaeological cultures. Each was characterized by different and distinctive pottery: Effigy Mound pottery was cord marked and grit tempered, while Oneota or Upper Mississippian pottery was smooth-surfaced and shell tempered (McKern 1928a; 1931). Each type was associated with other distinctive patterns and styles of technology, burials, and other features (McKern 1942, 1945; McKern and Ritzenthaler 1949). After examining eastern Wisconsin habitation site assemblages and drawing on the work of Griffin (1937) and Mott (1938) who had fairly convincingly connected Upper Mississippi (Oneota) pottery with the Chiwere groups, McKern determined that the eastern Wisconsin Oneota material of the Lake Winnebago focus probably represented the prehistoric Winnebagos (McKern 1942, 1945). Clearly to him, then,

> If Winnebago pottery was of this type [shell tempered, Upper Mississippian], the Effigy Mounds of Wisconsin, with their typical Lake Michigan pottery, were not built by the Winnebago. As a matter of fact, there is no archaeological evidence for the Winnebago origin of these mounds. [McKern 1931:386]

On this basis, McKern disputed the Winnebago–effigy mound link for reasons beyond his view that Radin was the source of Winnebago beliefs of a connection. McKern believed he had identified the archaeological cultures of both the effigy mound builders and the prehistoric Winnebago, and they were clearly different and unrelated. While McKern suggested historical links for several archaeological foci and historic tribes, he drew no connection between the Effigy Mound Aspect and any historical tribe:

> Just what happened to them [the Effigy Mound people] eventually is a major problem. If they ever left the state, we have not been able to find their new address; yet, not only had they faded from the picture at the raising of the historic curtain, but their culture offers no evidence of even a late contact with any of the Mississippi Pattern groups. From this it would seem that the Effigy Mound folks had either departed or ceased to be Effigy Mound folks before the arrival of the various cultural elements from the Southeast. It is possible that some unknown factor may have resulted in a change of burial customs to eliminate the effigy-shaped mound, after which the culture would be less easily recognized from the cultural remains available to the archaeologist; or, these people may have been attacked by invading armies (the Upper Mississippians?) with such vigor that they were reduced to the status of disorganized bands which joined other, stronger groups for protection and so lost their own cultural identity. [McKern 1942:164]

McKern thus was recognizing one of the strongest reasons to doubt claims of a direct Effigy Mound–Winnebago connection: the great time depth and cultural discontinuities that separated the practice of effigy mound building from the ethnographically recorded Winnebago and other peoples.

Summarizing the status of the debate on the possible Winnebago–Effigy Mound connection in 1960 in Radin's *festschrift*, Nancy Lurie wrote:

> It was believed for many years that the historic Winnebago Indians were the descendants of the people who made the effigy mounds in Wisconsin. The error was an understandable one, based on sound logic but a paucity of data. The mounds are scattered throughout a territory occupied by the Winnebago well into the nineteenth century. Although no Winnebago could recall having seen his people build mounds, the animals in many cases conform to shapes of mounds which are totems of Winnebago clans. Traditional references to earth works could be easily construed to refer to the effigy mounds as well as to the linear and round mounds belonging to the same trait complex. Whether this association of ideas first occurred to the Winnebago and was transmitted to archaeologists, or whether archaeological interest in the mounds spurred development of such a reasonable explanation is no longer known. The fact remains that a majority of the Winnebago people today believe that their ancestors made the Wisconsin mounds. More recent archaeological research refutes this contention and assigns the Winnebago to a different prehistoric tradition, known as the Mississippi Pattern. Apparently an intrusive population from the southeastern area, the Winnebago in Wisconsin did not produce these effigy mounds. [Lurie 1960:790]

Agreeing with Lurie that data collected by McKern and others refute Radin's conclusion, Carol Mason noted that when Radin wrote about effigy mounds

there was not enough information available through actual field work, artifact analysis, or appropriate dating techniques to provide a reasonable case for interpreting Wisconsin prehistory in one way as opposed to another, and today Radin's chapter in his Winnebago ethnography (1923:ch. 2, p. 76) is no longer even read, much less used seriously in the study of Wisconsin prehistory. [C. Mason 1985:98]

Even beyond the weakness of the archaeological data, the unclear clan–mound connections, the incompatibility of mound distributions with actual Winnebago habitation areas, particularly in the Winnebago homeland region of Red Banks in northeastern Wisconsin, and the possibility that Radin encouraged the Winnebagos to claim effigy mound authorship, C. Mason argued that Radin's work was an "application of analogical reasoning that was flawed to begin with, and the hypothesis should not have needed archaeological disproof" (ibid.). Evidence of the enormous disruption of Winnebago life in the 1600s (Lurie 1960) leads to legitimate doubts about the use of specific historical recollections, as noted in Appendix D of this report: "To agree with those recollections when they are useful and ignore them when they are not gives archaeologists a convenient authority to appeal to but no way of demonstrating that their analogies are correct: connections between modern ethnography and even 18th century Winnebago life have not been established" (C. Mason 1985:100).

It is also important to note in this context that even though McKern's dismissal of Radin's direct Effigy Mound-Winnebago connection was archaeologically well founded, McKern's positive identification of the prehistoric Lake Winnebago focus (phase) Oneota with the Winnebago tribe is not as strong as it once appeared. As C. Mason has pointed out, "the actual evidence upon which this identification originally was made is so slim as to be almost nonexistent (1976:348; see also C. Mason 1993b). No clear archaeological association between Lake Winnebago phase ceramics, historic trade goods, and a Winnebago occupation of the early contact period has been found, and radiocarbon data do not indicate Lake Winnebago phase continuation into the historic period. The conclusions of several articles in the volume devoted to investigating the Oneota–Winnebago historical connection (Overstreet ed. 1993) are that the Lake Winnebago phase may have had some direct or indirect role in Winnebago prehistory, and that the Huber and Orr Oneota phases may have, too. An Oneota–Winnebago historical connection of some kind is generally accepted for the western Lake Michigan basin, although whether the connection is through an eastern Wisconsin group continuity (Overstreet 1997) or through the Huber phase (Hall 1993) or other means is not known.

McKern's conclusion regarding the lack of developmental connection between Effigy Mound and Oneota–Winnebago was acceptable in the subsequent research era (1945–1971) because it was generally compatible with the new radiocarbon-based chronologies and new understandings of Cahokia that were built in the 1950s and 1960s (e.g., Griffin 1960). The viewpoint also prevailed because it was difficult to perceive how the apparently massive differences between Late Woodland and Oneota could have resulted from in-situ processes. Hall (1962) was one of the few to suggest an indigenous rather than Middle Mississippian-derived origin for Oneota, but the local precursors were represented by the small amounts of shell-tempered Douglas and Baraboo pottery found in Wisconsin rather than the archetypal Effigy Mound Madison ware.

McKern's view helped shape Chandler Rowe's overview of the Effigy Mound culture (1951, 1956). As noted in Chapter 6, Rowe classified mounds according to shape in plan view and then investigated the possible relationships between mound shapes and historically recorded clans within local Indian cultures. The hypothesis he tried to test was essentially that of the earliest effigy mound observers: that the mounds represented clan symbols or totems. Finding no clear

relationships between mound shapes and recorded clans of several tribes including the Winnebago, Rowe rejected the concept of clan identification for the mounds but reached no firm conclusions regarding the mounds' functions, meanings, or cultural affiliations, other than they probably served "certain ceremonial purposes, perhaps some religious rite involving animals" (Rowe 1956:90).

Just as McKern and others found significant factual and logical problems with Radin's Effigy Mound–Winnebago connection, Baerreis (1958), Mallam (1976a), and Hall (1993, 1997) faulted Rowe's analysis on several grounds. Baerreis's critique noted:

> Aside from the uncertainty in attaching specific names to the animal or concept symbolized by the mounds which Rowe admits, implicit in the argument is the idea that each of the tribes involved had a fixed number or kinds of clans from earliest times and also that the significance of mound construction underwent no change from early to late phases of the culture. This may well be in error… Since the mounds are burial mounds, it is reasonable to assume that they perpetuate the affiliation of the individuals buried in them (whether clan, guardian spirit, or whatever) or perhaps of the individuals performing the burial service. [Baerreis 1958:320]

Years later, Mallam (1976a) and Hall (1993, 1997) suggested that Rowe's effort to detect the meanings of effigy mound shapes by comparing them with clan totems of historic tribes was unreasonably restricted because it neglected spirit beings as possible subjects of representation. The scope of Rowe's comparisons was so limited that he did not consider the Winnebago statements that the long-tailed panther mounds represented water spirits or the fact that the Winnebago Thunder clan was represented by the thunderbird figure, a common effigy form. Viewing "panther" and "bear" mounds and intaglios as water and earth spirits, and "bird" and "man" mounds as upper-world spirits (thunderers or representatives of the Thunder clan) would bring nearly every known effigy shape into accord with the essential cosmologies of all tribes in the region.

In the 1960s, Hurley's (1975) excavations in central Wisconsin led to fuller understanding of Effigy Mound settlement and subsistence patterns, but they also led to confusion regarding chronology and cultural connections. Hurley proposed the Effigy Mound tradition was extremely long-lived, persisting as recognizable Late Woodland complexes from ca. A.D. 300 until European contact. He saw no development into Oneota but continued Effigy Mound culture occupation after A.D. 1200 of areas not inhabited by Oneota people. The relationship between the two cultures was one of culture contact, not of transformation or evolution (Hurley 1974).

Gibbon (1972) challenged this viewpoint by arguing that evidence and logic indicated a relatively rapid transition from Effigy Mound to Oneota, sparked by human-ecological factors and Mississippian contact. As the evidence showed that effigy mounds were built only during Hurley's "Middle Effigy Mound" period, ca. A.D. 650 or 700–1100, Gibbon's new synthesis and model accounted for the post-Mississippian disappearance of Effigy Mound and its transformation into Oneota. However, Hurley continued to maintain that Effigy Mound did not transform into Oneota and that it retained an identity apart from Oneota during late prehistory. Despite what would seem like the natural desirability and relative ease of determining a historical connection for a culture that supposedly persisted until 1642 ("the time of historic contact"; Hurley 1975:354), Hurley initially declined to suggest a link between Effigy Mound and a historical group. However, his 1986 Effigy Mound review gingerly handled the question of historic cultural affiliation by suggesting that Effigy Mound might have been ancestral to the Dakota Sioux:

It has been held, without any evidence, that the Effigy Mound peoples were Algonquian speakers in contrast to the indigenous Chiwere Siouan speakers, such as the Winnebago. The Algonquian – Siouan dichotomy has continued to color if not to cloud interpretations in eastern North American archaeology. I would suggest that the Effigy Mound peoples have yet to be firmly attached, via direct historic methods, to any modern tribe in the Upper Great Lakes region. They could well have been Siouan speakers such as the Dakota Sioux who may have moved from Wisconsin to central and northern Minnesota as the Cheyenne and other groups moved westward. This hypothesis as well as any other concerning their demise or historical tribal identification needs to be supported by further excavations, reanalyses of published and unpublished site data, computer/statistical verifications, and renewed linguistic interest in prehistoric/historic problems. [Hurley 1986:291]

Hurley ended with the disappointing thought that "regarding the purpose of mound construction and which tribe or tribes built these mounds, we are no further along than Lapham was in 1855" (Hurley 1986:298).

Yet much thought had been given to the purposes and functions of effigy mounds. Mallam (1976a, 1980, 1982a, 1983, 1984b) and Benn (1979) in particular had developed models of cultural ecology, process, and ideology that viewed effigy mounds as fully functional elements of Late Woodland cultural systems (see also Goldstein 1995). "In this system the mound complexes served as integrative mechanisms, the institutional means for coordinating and articulating the cultural activities of numerous hunting and gathering societies seasonally exploiting the northeastern Iowa ecotone" (Mallam 1976a:68). The animal forms "stood as the political or social symbols of the corporate group who constructed them and are buried within" (Benn 1979:71), or they represented the essential duality of Native cosmology and ideology, earth/water spirits and sky/thunder spirits (Hall 1993; Mallam 1982a). In this way, effigy mound building "may be perceived as an ongoing world renewal ritual, a sacred activity humans entered into in order to ensure regular and consistent production of natural resources" (Mallam 1984b:19). Goldstein refers to effigy mound groups as "maps," i.e., "symbolic representations of both form and space," indicating resources controlled by particular groups. "Within a mound group, the number of different types of effigy forms may represent not only clan or corporate groups, but also diversity of resources" (Goldstein 1995:118, 120).

Birmingham and Eisenberg accept the map metaphor and go one step further: they view effigy mound groups as "maps of ancient belief systems." "The underlying structure of effigy mound ceremonialism is the division of the universe into the upperworld and lowerworld and the subdivision of the lowerworld into the realms of earth and water. The spatial relationship of effigy mounds mimics or models this ideological structure" (Birmingham and Eisenberg 2000:129). This ideological "mapping" accounts for the frequent inclusion of at least one mound of each division in most mound groups, maintaining a balance between the earth/water and sky symbols. Thus, mound forms do not necessarily represent individual clans but more broadly recapitulate the underlying dual-realm cosmology and ideology, a belief system expressed in other Late Woodland media (Sampson 1988) and a nearly universal division among Native groups (Hall 1993, 1997).

These models of effigy mound purpose and meaning facilitate interpretations of mound functions, but they do not necessarily demonstrate direct connections of any particular sort with Oneota or succeeding groups. Models of Effigy Mound transformation into Oneota or resistance against Oneota, or some combination, both are compatible with these viewpoints. Mallam

believed Oneota "impact on the local population was considerable. In short order they either became Oneota or moved. It seems that the Oneota used, on occasion, the mounds of the Woodland peoples." Intrusive burial "may have signified Oneota respect for the preceding lifeway, or, alternately, served to symbolize their aggregate strength by appropriation of the sacred ground of others" (Mallam 1983:44).

Benn asked:

> What happened to the Effigy Mound Culture? The continuity between the Effigy Mound Tradition and historic tribes remains unresolved… Central to the question of the demise of Effigy Mound culture is the development of Oneota culture across the upper Midwest after ca. 800 AD. Other authors (e.g., Hall 1967:180; Gibbon 1972) have argued that Woodland peoples were transformed into Oneota… I take the speculative position that some Woodland peoples did, indeed, become Oneota, and that Oneota and the Effigy Mound culture could have been contemporaries in the same broad region, *but not the same territories*.… [T]he Effigy Mound tradition had a totemic social system synchronized with the seasonal round of hunting and collecting and ceremony, while the Oneota were maize-complex agriculturalists. One suspects that the ideology of these two cultural systems was as different as their subsistence and social organizations. Thus, we can predict that the conflict between Oneota and Woodland peoples probably centered on the divergence of belief systems and social integrative mechanisms. [Benn 1979:77–78; emphasis in original]

This divergence in both the ideological and socio-economic realms differentiates the Effigy Mound and Oneota traditions whether they overlapped in time as Benn suggested or were essentially sequential. Either way, the gap between Effigy Mound and Oneota represents a stark difference, a significant cultural discontinuity, yet one that is not impossible to bridge—in theory—via various historical and transformative processes (see also Benn 1989, 1995; Gibbon 1994; Stoltman and Christiansen 2000; Theler and Boszhardt 2000). In the following section we take a tentative step toward modeling Effigy Mound–Oneota relationships, an effort that is just the most recent of many approaches to this subject.

AN INTEGRATIVE MODEL OF EFFIGY MOUND–ONEOTA HISTORY, PROCESS, AND IDEOLOGY

Research since the 1830s on Effigy Mound and its possible descendants and cultural affiliations has generated a wide variety of speculations, hypotheses, and models. All of the studies have attempted to make sense of the available archaeological, historical, and ethnographic data within the changing conceptual and theoretical frameworks that have characterized American anthropology. Reviewing this background in the preceding section is useful in understanding the development of current thoughts on Effigy Mound development and relationships.

We suggest there are three main threads to current archaeological approaches to understanding Effigy Mound in a diachronic context. For convenience, we oversimplify and term them the processual-ecological, social-historical, and ideological approaches. Each thread or approach represents a particular way or ways of viewing and thinking about archaeological data, i.e., a conceptual framework. These frameworks are not mutually exclusive but can be complementary. In fact, most models already crosscut these threads to a degree, and many researchers incorporate elements from more than one approach. We believe it is useful to try to integrate these approaches more explicitly, and so we attempt to build an integrative model to help attain a better

understanding of the relationships between Effigy Mound and subsequent Late Prehistoric and Historic cultures. Such an effort may lead to more realistic reconstructions of the past.

Within each thread, current researchers have suggested several models and hypotheses regarding the Effigy Mound demise, Mississippian influences, Oneota origins, and historical connections. It will be instructive to review the approaches and the models, highlighting their distinctive features. Some common ground already unites the three main threads. In particular, each relies upon essentially standard sets of sequences for Effigy Mound, Middle Mississippian, and Oneota complexes (see, e.g., Boszhardt 1999; Hall 1991; Stoltman and Christiansen 2000). These sequences modify or supplant earlier temporal schemes, particularly the overly inclusive Effigy Mound chronology of Hurley (1975). The principal area of disagreement on sequence concerns whether Oneota became a recognizable tradition before or after A.D. 1100 and thus whether the appropriate model for the origin of the Oneota tradition should emphasize transformational or parallel developmental processes. The diverging viewpoints and their implications are discussed below.

To briefly characterize each of the three main threads: The processual-ecological approach is well represented in recent literature by Rodell (1997), Stoltman (1983, 1986, 1990; Stoltman and Christiansen 2000), and Theler and Boszhardt (2000). Distinctive elements of this approach include a focus on subsistence and settlement systems, ecological adaptations, technology, interaction patterns, and demography. Consideration of these factors includes an emphasis on apparent changes or continuities over time. The social-historical approach similarly stresses temporal patterns and processes, but it also emphasizes the importance of social factors such as core-periphery relationships, political power, and gender roles (e.g., Benn 1995; Emerson 1999; Staeck 1998a). Finally, the ideological thread is often expressed by adding considerations of world-view and cosmology into the mix of ecological and social interests (e.g., Benn 1989; Mallam 1983, 1984). Often, the ideological approach employs oral tradition and other ethnographic or ethnohistoric data in order to suggest analogies or explanations for particular patterns and historical sequences (Fox and Salzer 1999; Gartner 1999; Hall 1993, 1997; Salzer 1993; Staeck 1993, 1994; 1998b, 1999).

Each of these approaches or threads has made important contributions to Effigy Mound studies. Integrating these threads will be a major project for which we can take only an initial step here. Before doing so it is worth mentioning two additional points. First, as noted earlier in this report, the basic tenets of the Direct Historical Approach, which was the earliest systematic archaeological approach to determining affiliations between historic groups and archaeological complexes (Wedel 1938), still underpins current efforts aimed at understanding relationships between history and prehistory. However, the original goal of linking a known historic group with *a* prehistoric predecessor is complicated by the realization of the widespread importance of ethnogenesis as a mode of group identity formation, wherein a single "descendant" group may have multiple predecessors, and, of course, vice versa. Second, despite the limitations of sample size, we wish to re-integrate the dimension of human biology if possible into studies of cultural relationships and affiliations. While there is no necessary equivalence between genes, cultures, and languages, there is no denying the value of learning about the physical relationships between human groups as one means of addressing possible cultural relationships.

We suggest an integrated model for:

1. the demise of Effigy Mound around A.D. 1050
2. the rise of new "Mississippianized" identities and social/cultural units between ca. 1050 and 1150
3. the spread of various Middle Mississippian and Upper Mississippian and related traditions between ca. 1150 and 1700, and

4. the possible relationships of various historic groups to these late prehistoric and protohistoric traditions.

The model attempts to account for patterns and processes of Effigy Mound and late prehistoric settlement and subsistence, regional relationships, and ideologies, as well as for the ethnohistoric and ethnographic records of oral traditions and linguistic relationships. The goals of such integrative model building are to help detect and clarify possible relationships among different data sets and to suggest plausible reconstructions that might be of use in determining cultural affiliations, recognizing both the advantages and the limitations of the data sets. The model is tentative and intended to be testable rather than definitive. The utility of recognizing processes of ethnogenesis as described in Chapter 2 will be evident as we discuss the elements of the integrative model.

It is necessary to provide some background and discussion of each of the main approaches to the questions of Effigy Mound relationships with later groups. We begin by reviewing the recent contention of an ideologically-based connection between Effigy Mound and the Chiwere (including Winnebago/Ho-Chunk) peoples. Links based on oral tradition and ideology from Effigy Mound through Oneota to Chiwere have been made most strongly in recent years by Hall (1993), Staeck (1998b, 1999), and Salzer (1987, 1993; Fox and Salzer 1999). These rehabilitated Effigy Mound–Ho-Chunk links are integral parts of Birmingham and Eisenberg's (2000) and Gartner's (1999) discussions of prehistoric mounds and landscapes, as well as Smith's (1996, 2000) Ho-Chunk tribal history. Our examination of ideology will focus on Salzer's discussions, because those relate Chiwere oral traditions to a considerable amount of recently generated archaeological data.

Salzer has suggested a close Chiwere-Effigy Mound connection on the basis of data from the Gottschall site in southwestern Wisconsin. A pictograph panel at that rockshelter contains a composition that apparently represents the major characters from the Red Horn story cycle as recorded among the Ho-Chunk and Ioway (Fox and Salzer 1999; Hall 1997:148–151; Salzer 1987, 1993; see Radin 1948; Skinner 1925:456–458). Some motifs in the paintings "relate to iconographic conventions found in prehistoric Mississippian cultures to the south" (Salzer 1993:96). Therefore, "the Gottschall artists were sharing many of the symbols, and the motivating ideology, with Emergent [sic] Mississippian peoples (i.e. Lohman [sic] and early Stirling phases at Cahokia, 950-850 B.P.). Three radiocarbon assays, from tightly controlled contexts, indicate that the composition was painted around 1050–950 B.P., supporting the preceding conclusion" (Fox and Salzer 1999:254). The deposit that was the "active surface" when the paintings were executed contained artifacts identified by Salzer as Effigy Mound as well as Aztalan Collared.

A painted human head sculpture was found in the deposit immediately overlying the stratum that contained the pigment spill. Dated to ca. AD 1000–1050, this layer contained a complex-cord-impressed vessel "clearly related to Effigy Mound ceramics" (Fox and Salzer 1999:256) as well as Aztalan Collared and plain shell-tempered pottery. Salzer identifies this sculpture as a "mortuary figure, quite possibly a portrait of a specific individual" (Fox and Salzer 1999:257), and suggests it may have functioned within a ritual similar to the Ho-Chunk War-bundle feast as recorded by Radin (1923).

Salzer has drawn several conclusions about the longevity of the ideologies expressed at the Gottschall site and about connections between the site's occupants and the Chiwere peoples. In 1993 he stated that "people who shared at least part of the ideology of the modern Winnebago have clearly been residents in southwestern Wisconsin for a period of time that appears to reach back a thousand years, as reflected in the Red Horn paintings" (Salzer 1993:95). Along with ethnographic evidence, the Gottschall site helps "identify the long-term presence of the

ideological ancestors of the modern Ioway and Winnebago peoples in the southwestern Wisconsin area" (1993:113).

By 1999, Salzer identified the Effigy Mound culture occupants of Gottschall as the ancestors, not just the ideological ancestors, of the Ho-Chunk and Ioway peoples:

> Clearly, the artists must have been the ancestors of the HoChunk and Ioway peoples, but stratigraphically, they must have been the Eastman Phase (early Effigy Mound) occupants. This is at variance with the widely held consensus that it is Oneota, not Effigy Mound, that is the precontact expression of the HoChunk and Ioway (Mason 1993; Overstreet 1993). This view is based in part on the fact that it is Oneota, not Effigy Mound material culture, which persists after 650 B.P. and into the contact period. However, the HoChunk have claimed that their ancestors built the effigy mounds (Radin 1923), and they continue to do so—now with some archaeological support. It remains for archaeology to find some answer to this apparent contradiction in realities. [Fox and Salzer 1999:255]

> …the (Effigy Mound) ancestors of the HoChunk and probably the Ioway engaged in a ritual that has remarkable parallels to what they performed some 900 years earlier [ibid.:256]

> …ethnographic data provide a solid basis for identifying the participants in the [Gottschall site] rituals as being part of the ideological ancestors of the modern HoChunk and Ioway, and these peoples certainly included the artists who painted the Red Horn group of figures. Those peoples were, during the period of use, members of an archaeological construct called the "Effigy Mound culture"; but at contact times, at least, the Ioway and probably the HoChunk can be identified with the "Oneota culture." The information from this site strongly argues for ideological continuity between additional archaeological "cultures"; materially discrete manifestations which do not readily appear to express such an ideological (ethnic?) continuum. [ibid.:258]

Even if it is not universally accepted (Mason 2000:254–255), Salzer's and Hall's identification of the Gottschall composition with the Red Horn cycle as recorded among the Ho-Chunk and Ioway is well-reasoned and plausible. However, the association Salzer draws between the painters of this composition and the Effigy Mound culture may not be as strong. Salzer dates the principal pictograph composition at Gottschall to ca. A.D. 900–1000 on the basis of stratigraphic and radiocarbon evidence. However, as Boszhardt notes (1999:210–211), the reported Gottschall site radiocarbon data are consistent with a post-A.D. 1000 rather than pre-A.D. 1000 age for the pictographs. Additionally, associated artifacts recovered through Salzer's well-controlled excavations indicate the pictograph would not be associated with "early Effigy Mound" as Salzer suggests but with the final decades of Effigy Mound or with a succeeding Late Woodland group. The minimum age of an archaeological stratum can be no greater than the age of its youngest artifacts and dated materials (unless they intruded into that stratum), so the age of the pictographs, based on a paint spill in a stratum with diagnostic pottery, is not necessarily any earlier than the age of the latest associated ceramics, in this case Aztalan Collared and plain, shell-tempered pottery. In southern Wisconsin, Aztalan Collared dates to ca. A.D. 1000–1100, appearing occasionally in late Effigy Mound contexts and often in Mississippian contact contexts (along with shell-tempered pottery) among non-Effigy Mound Late Woodland groups (Finney 1993; Stoltman and Christiansen 2000).

Salzer emphasizes the southern, Mississippian elements that characterize the pictograph figures, noting the similarity of several motifs to those of the Lohmann and early Stirling horizons. As Salzer points out, these style elements are neither Effigy Mound motifs nor otherwise indigenous to the Upper Mississippi valley but are Mississippian in origin. Salzer and Hall argue that the paintings and the associated rituals and beliefs may have constituted some of the cultural baggage that was involved in the adoption, as fictive kin, of one group by a distant other. One key component of the paraphernalia involved in this hypothesized adoption ritual is the Long-Nosed God maskette, which may have been made of shell, copper, or wood, or represented by tattoos, as one of the Gottschall figures appears to exhibit (Hall 1991:31; Salzer 1987:450–452). Hall states that the maskettes (worn by Red Horn, a.k.a. "He-who-wears-human-heads-as-earrings") "may have functioned in the Early Mississippi period of the eastern United States within an adoption ritual much like that of the Calumet ceremony of the Historic period" (Hall 1997:151). The ritual drama may have been "part of an adoption ceremony used to provide a ceremonial relationship between the participants through a fiction of kinship," specifically to "establish friendly relations between otherwise unrelated groups" (Hall 1991:31), for example "between the powerful leader of a large polity and his political clients in outlying areas" (Hall 1997:151). The Red Horn cycle and associated stories suggest that such adoption led to participation by many groups in a wide range of relationships and desirable connections with Mississippian groups (Duncan and Diaz-Granados 2000). At Gottschall and other sites, the paintings associated with the ideologies of this ritual were executed in the style of the group that was likely the more influential partner (i.e., Mississippians). The paintings and probably the ritual dramas were situated in shrines or other sacred locations belonging to the various dispersed societies that were being joined with the semidivine Mississippian leader or lineage (see, e.g., Duncan and Diaz-Granados 2000). If adoption proceeded "as a metaphor of rebirth" (Hall 1991:31), there would have been no more appropriate location for such rituals than a cave or deep rockshelter such as Gottschall, a portal to and from the underworld.

In essence, then, our model suggests that early Mississippian groups, having developed a ranked, hierarchical political structure in the American Bottom by ca. A.D. 1050, adopted many "hinterland" groups as fictive kinfolk through ritual means (see Finney 1993, 2000a; Green and Rodell 1994; Hall 1991). The motivation for Mississippian elites to sponsor such adoptions and for Late Woodland people to participate were perhaps many and varied. On the Mississippian side, there is little doubt that the elites were able to attain only local rather than regional control, but consolidation of local power required establishment of long-distance connections and alliances that could supply status-enhancing goods. The ruling lineage(s) needed to accumulate exotica and well crafted items from the edges of the known world in order to confirm and consolidate their semidivine nature, which legitimized their leadership (Green 1997; see Helms 1993). In the crowded and competitive environment of the times, local control required broad regional connections, which in turn required accumulation of prestige goods. Such goods arrived in the American Bottom at the time the elites were adopting hinterland groups as fictive kin. This was an acquisitive system in which we see the prestige-good tips of what was probably an iceberg of fictive-kin adoptions, alliance-making, and influence peddling, not a network of real exchange of goods or services. Reciprocity was expected, as in any exchange system, with a developed, or at least expected, set of rights and obligations between individuals or groups at some time in the future. But it was not necessarily balanced reciprocity, viz., networks such as the Kula rings (Malinowski 1960) and compadrazgo systems (Ravicz 1967).

Viewed from the Upper Mississippi valley, major factors that might have attracted many Late Woodland peoples to become partners would have been the opportunity to ally with a clearly powerful group as either a status-building device within a "transegalitarian" network (Staeck

1994, 1998a) or as a simple means of ensuring they were not placed at a comparative disadvantage as their neighbors bought into the Mississippian "family." Late Woodland peoples were not necessarily given an offer they couldn't refuse, but any single group's options became constrained during and just after this short period of initial alliance-building: walk away (some probably did), move south to join the Mississippians in their communities (Emerson and Hargrave 2000), or consolidate with others in the region to create new networks and identities (Emerson 1999).

Radin (1948, 1949), and then Griffin (1960), Lurie (1974), and most recently Staeck (1993, 1994, 1999), examined Chiwere–Ho-Chunk oral traditions and history and concluded (1) that the Ho-Chunk, Ioway, and Oto traditions describe and place a high value on matricentered and hierarchical behavior, the opposite of the historic-era tribes, and (2) that such sociopolitical complexity may have characterized the social systems of the prehistoric Ho-Chunk and Chiwere. (The Dhegihan groups also are identified as having once had a more complex sociopolitical structure [Griffin 1960].) It is notable that C. Mason (1993a) questions these reconstructions on the basis that Radin's telling of these stories and his interpretations were shaped by what amounts to "feedback" from archaeological sources: Radin became convinced that North American prehistory derived from the spread of influences from Mesoamerican civilizations. He believed the Winnebago in particular descended from or at least inherited Maya traditions, or perhaps Maya as filtered through the Mississippians. As C. Mason points out, there was no ethnographic or historical evidence to support any of this, only an outdated archaeological framework which itself had no solid basis. So, can the Winnebago stories be used to indicate past complexity? Iowa traditions are similar (e.g., Skinner 1925, 1926) and may be free of such feedback, lending some credence to their authenticity and thus possibly to the inference that Radin did not shape the Winnebago stories to match his preconceived notions of prehistory. The jury is out. We will accept the Iowa and Winnebago stories as referring to a complex past—whether mythical or real is not crucial—with the caveat that further critical study is needed. Additionally, the political organization reflected in the stories is an important but not crucial element of this model; rather, the use of these stories in ritual adoption is key to understanding their historical contexts.

Returning to the stories, analysis of the Red Horn cycle and other oral traditions of the Ho-Chunk suggests that the society portrayed therein "appeared to have well-developed ranking, quite unlike the Winnebago as they have been known through the past three centuries" (Hall 1997:151). Recently, Staeck has developed models of ancient Ho-Chunk social structure based on systematic analyses of sub-texts, i.e., "the repetitively portrayed connections between characters, identity and social obligations" as recorded by Radin (Staeck 1999:72), finding evidence of rigidly hierarchical organization and social stratification (Staeck 1993, 1994, 1999). Just as these hierarchical relations are absent from the historic Chiwere groups, few indications of such complexity appear in either Oneota or Effigy Mound contexts. Long-house villages and intensive agricultural practices among the late prehistoric Oneota suggest matricentered but not hierarchical organization (Hollinger 1995). Effigy Mound contains evidence of neither matricentered nor hierarchical behaviors, despite Staeck's efforts to find them (1998a, b). Griffin (1960) and Lurie (1974), however, pointed in the appropriate direction — the Middle Mississippians — although they suggested widely divergent models of bringing a Mississippian structure into the stream of Winnebago history. Data since collected show both of their analyses were somewhat wide of the mark.

Griffin's "Hypothesis for the Prehistory of the Winnebago" (1960) worked from the then and still widely accepted premise that Oneota formed the archaeological signature of the prehistoric Winnebago and Chiwere groups (Griffin 1937; Mott 1938; McKern 1945). In seeking Oneota origins (Griffin 1995), Griffin looked south to the Middle Mississippians of the Cahokia region.

He saw a likely predecessor in the Cahokia "Old Village" complex (constituted largely by what is now known as the Stirling phase), and he identified several intermediate and transitional sites and complexes as well. With their elaborate temple-towns and clearly ranked social organization, Middle Mississippians supplied evidence of a culture consistent with Radin's and Griffin's expectations for the complexity hinted at in Chiwere and Ho-Chunk oral traditions. In Griffin's model, Mississippians migrated north from the American Bottom during Cahokia's peak, settling at Aztalan, Apple River, Silvernale, and other locales. When they arrived in the north, these "proto-Oneota" people "found resident Woodland populations of the Lake Michigan Effigy Mound period occupying the land" (Griffin 1960:856). The Mississippians' transition to Oneota involved simplification of their culture although they retained oral traditions of their past. These simpler cultures with their rich Mississippian past thus formed the Oneota and the ethnographic Ho-Chunk and Chiwere peoples. It is unclear what happened to the Effigy Mound people, although Griffin suggests that they, too, ultimately adopted an Oneota-like culture but not that of the Ho-Chunk–Chiweres. Griffin thus derived the Ho-Chunk–Chiweres from Cahokia Mississippians, not from Effigy Mound.

Griffin's model of Oneota genesis has been superseded in many respects as debate on the subject has intensified over the past four decades. Hall (1962, 1986), Gibbon (1972, 1982), Hurley (1974), Overstreet (1997), Stoltman (1986a; Stoltman and Christiansen 2000), Theler and Boszhardt (2000) and many others have proposed historical or processual means to obtain Oneota out of, usually, some combination of Late Woodland (principally Effigy Mound) predecessors and Middle Mississippian influence. Several models posit an Oneota emergence parallel with, independent of, or even prior to the rise of Cahokia Mississippian. Lurie (1974) proposed a model that was never published but is worth attention in view of our efforts to understand how Ho-Chunk and Chiwere oral traditions of a Mississippian-like past can be compatible with an Oneota archaeological record that evinces little evidence for a high level of complexity. In essence, Lurie removed Oneota from its position as an archaeological expression of the prehistoric Ho-Chunk and instead derived the Ho-Chunk directly from the Mississippians of Aztalan. As noted above, others, most notably Carol Mason (1976, 1993b), expressed doubts about the connection between the Winnebago tribe and the prehistoric Lake Winnebago focus Oneota of eastern Wisconsin, a tie that many believe "ought to" exist even as it has resisted confirmation (R. Mason 1993:400). But Lurie went straight to the heart of the matter and said that because both Oneota and Effigy Mound archaeology were incompatible with Ho-Chunk tradition and ethnohistory, it was reasonable to propose an alternative archaeological signature for the group, one that matches the predicted hierarchical socio-political structure of the tribe's prehistory. She hypothesized that Aztalan was the earliest of the ancestral Winnebago villages in Wisconsin, followed not by Oneota but by additional Middle Mississippian-like sites in the region. The non-Oneota model is not widely accepted but points out the difficulty that the century's foremost ethnohistorian of the Winnebago has had with reconciling their traditions of a past hierarchical organization with the absence of such evidence in Oneota and Effigy Mound.

It is reasonable to propose that the ancient complexity suggested in the mythic texts and traditions do indeed refer to the real or imagined world of the Middle Mississippians and that these traditions were brought into the Effigy Mound world as part of the rituals of the Effigy Mound peoples' adoption into Mississippian lineages. In this scenario, the myths and traditions were syncretic ideological elements, layered onto and fully compatible with the existing and widely shared cosmology that included the dual division of the universe into earth/water and sky realms. Soon thereafter, the ideologies reflected in the maskette-Red Horn cycles became identified with the Oneota societies that developed ca. A.D. 1100–1200.

The Red Horn cycle and associated myths seem to be associated with the spread of an ideology and a series of art styles that were not apparently indigenous to the Effigy Mound ideological system. They were certainly compatible with the Effigy Mound emphasis on Thunderer–Water Spirit dualism, a concept that is deeply embedded in all midcontinental Native groups. The Mississippian ideology, with its numerous associated myths and rituals, helped integrate these societies that already had much of their core belief systems in common. Viewed in this way, many of the rituals and symbols associated with the spread of Mississippian ideologies (e.g., the Red Horn cycle) were *not* part of the belief systems of indigenous groups such as Effigy Mound but were adopted by local groups as part of their adoption into the broader Mississippian ideological world. This pattern of adoption and fictive-kin alliance-making apparently began at the time of the sudden emergence of the Cahokia chiefdom, the "Big Bang" (Pauketat 1994) around A.D. 1050. Therefore, those people whose myths and rituals are related to the Mississippian adoption system (i.e., many of the Chiwere and Dhegihan groups) may be descended from groups whose cultures were transformed at that time, or they may trace descent more directly from the "source" groups of (presumedly) the American Bottom. Either way, the adoption of Effigy Mound people into this network and the rapid and nearly simultaneous demise of the Effigy Mound culture argue that the Red Horn cycle and associated beliefs and rituals were not part of Effigy Mound life in pre-(Mississippian) contact times, and therefore that the Effigy Mound people were not necessarily the "ideological ancestors" of the peoples who maintained these ideologies in the historic period. Instead, a major part of the ideological ancestry of Dhegihan and Chiwere–Ho-Chunk (and probably other) peoples derives—via adoption—from Mississippian sources.

The most recently collected and compiled data indicate that Oneota emerged, at least in the Upper Mississippi valley, around A.D. 1100–1200, focused in large-scale population relocations to at least two key locales, Apple River and Red Wing. These localities are situated at the southwestern and northwestern corners, respectively, of the Effigy Mound culture territory. Construction of effigy mounds had ended or was ending at this time. Late Woodland peoples, many of whom had been affected by Mississippian contacts and ideologies, aggregated at these locations, leaving much of the Mississippi Valley and adjacent regions vacant for the period of ca. 1100–1250. Oneota ethnogenesis and tribalization developed as a way of incorporating and linking these formerly dispersed societies, perhaps in competition with or resistance to the Mississippian network. Likely accompanying the greater degree of local population size, density, and sedentism were increased interactions through exchange relationships and warfare. (For descriptions and explications of this basic scenario, see, e.g., Finney 2000a; Rodell 1997; Stoltman and Christiansen 2000; Theler and Boszhardt 2000.)

Mississippian influence was no longer a significant factor in the Upper Mississippi valley after ca. A.D. 1200. Even before the retrenchment of those feelers and alliances, interactions among various groups in the "hinterlands" continued through the web-like networks that had connected societies for centuries (Green 1997). Oneota societies after A.D. 1250 then spread throughout the Midwest, including into some of the areas formerly occupied by Effigy Mound peoples. Many places that were centers of Effigy Mound life ca. A.D. 650–1050 were never occupied by Oneota people, but Oneota group continuities were established in several regions (see papers in Hollinger and Benn 1999).

In northeast Iowa and adjacent southwest Wisconsin, cessation of effigy mound building ca. A.D. 1050 was accompanied by development of a new Late Woodland complex that displayed "hybrid" Mississippian and Plains Village but no Oneota characteristics. These sites date to ca. A.D. 1050–1150 (Benn and Green 2000; Finney 1993; Finney and Stoltman 1991; Tiffany 1982) and may represent either the direct descendants of the local Effigy Mound people or groups of

new settlers from places like northern Illinois where some of these artifact styles probably developed. (Similar patterns can be seen in southeastern Wisconsin.) Subsequently, the region was abandoned. Did these people move to the Red Wing or Apple River regions, along with many other ex-Effigy Mounders, to reformulate their societies along Oneota lines? Did they move west, either into the Plains Village communities with which they had been interacting or into other regions?

In general, we suggest that the Effigy Mound peoples of the Upper Mississippi valley were profoundly transformed in several ways between ca. A.D. 1050 and 1250. In simplistic mechanistic terms, they "entered" that era as Late Woodlanders and most of them "exited" as Oneota. Ethnogenesis at Red Wing and other locations on the Effigy Mound frontiers involved aggregation of various groups (Effigy Mound and non-Effigy Mound), recombinations, and development of new identities. The newly formed groups were strongly linked in ideology and through various forms of exchange relationships. The differences between them and their predecessors were profound, especially in terms of identity as expressed through ritual and mortuary behavior. Mortuary ritual is one of the strongest expressions of ethnic identity; "ritual and symbolic practices are important because of their close linkage to 'the underlying social order and specific symbol-set of a given society' (Beck 1995:171–172)" (Emerson and Hargrave 2000:2). Effigy Mound and Oneota mortuary ritual behavior differ in the extreme: Effigy Mound burial involved individual (rarely communal) secondary interment within conical mounds and within mounds that were built to resemble the principal spirits of the earth/water or sky realms, and that are segregated from occupation sites; Oneota burial often involved primary burial within individual graves in unmounded cemeteries (and occasionally in mounds), as well as primary burial within graves beneath long-house floors and secondary burial in other parts of the village. Such polar distinctions reflect different social orders, symbol sets, and identities.

What do these differences mean in terms of the relationships between Effigy Mound and Oneota? In all likelihood, much of the Oneota heritage belongs to Effigy Mound and other proximate Late Woodland groups, even though the bioarchaeological data are not clear. No other likely sources for Oneota can be identified, given current understandings of regional prehistory. Nevertheless, the Late Woodland-Oneota relationship is marked by profound discontinuities. Because of the ways that Oneota was formed—through amalgamation and reorganization of previous groups—group continuities and, thus, relationships of shared group identities cannot be identified prior to ca. A.D. 1200. Late Woodland people from the Mississippi valley were not the only groups that coalesced to form the Oneota tradition: some Plains Village populations as well as Middle Mississippians probably participated (e.g., Rodell 1997). And as noted earlier, not all Late Woodland groups necessarily took the Oneota path. For example, the bioarchaeological evidence of an Effigy Mound-Kathio-Big Stone relationship (Chapter 7, this report) is compatible with archaeological evidence of collared Late Woodland-like ceramics in the Big Stone phase (Anfinson 1997), which then fits nicely with the Hidatsa origin proposal of Ahler et al. (1991). In this speculative scenario, those Effigy Mound and Kathio Late Woodland peoples who did not join the Oneota emergence moved first to western Minnesota (the Big Stone phase, ca. A.D. 1100–1300) and subsequently to the Middle Missouri region by A.D. 1600.

In sum, this model integrates demography, ecology, social relationships, and ideology in examining the demise of Effigy Mound and the transition from Late Woodland to the Oneota tradition. While this model needs a great deal of elaboration, refinement, and testing, it provides a holistic context for analyzing possible relationships between Effigy Mound and historical groups. The model's major new contribution to an already robust body of theoretically well-founded interpretations is that the apparently incongruous mythic history of the Chiwere peoples—one involving Middle Mississippian-like sociopolitical complexity—may be viewed as the syncretic

adoption of that history by many groups as part of a ritual adoption package symbolized in the maskette-Red Horn complex. This interpretation is consistent with the observations that, in the Upper Mississippi Valley:

1. Effigy Mound ended around A.D. 1050
2. new ideological elements accompanied the demise of Effigy Mound and the formation of terminal Late Woodland and, shortly thereafter, Oneota identities
3. a variety of demographic, ecological, and social-historical factors led to aggregation at select places (Red Wing, Apple River) and abandonment of large regions
4. new "tribal" sociopolitical organization and Oneota identities emerged as a result of ethnogenesis in those regions, and
5. historical connections exist between these Oneota groups and various Siouan speaking tribes.

Chapter 9. Conclusions and Recommended Further Studies

by William Green and Larry J. Zimmerman

In this section we review the main conclusions of the cultural affiliation study and we present a list of recommended further studies and possible interpretive topics for Effigy Mounds National Monument. Several of the conclusions derive from those presented in Appendix D regarding oral traditions.

CONCLUSIONS ON CULTURAL AFFILIATIONS

1. The preponderance of available evidence suggests that some Siouan-speaking groups may be broadly affiliated to the effigy mounds.

The consistent theme in the archaeological and historic records is that contemporary Siouan speaking peoples (especially Chiwere and Dhegihan groups) derive from protohistoric and prehistoric Oneota peoples. In turn, although the connection is difficult to prove from the archaeological or biological records, Oneota peoples probably derived from earlier Woodland tradition peoples including those who built the effigy mounds.

2. A relationship of shared group identity between the effigy mounds and specific tribes cannot be established because group continuities that link Effigy Mound with Oneota cannot be established.

The cultural transformations at the Late Woodland – Oneota interface in the Upper Mississippi valley involved significant organizational changes, including group fission and fusion, and establishment of new group identities. Effigy Mound culture ended abruptly and was replaced by Oneota, but Oneota cultures include many of the likely descendants of Effigy Mound people. The preponderance of evidence suggests that this transformation involved replacement of previous shared group identities.

3. Oneota is ancestral to a number of Siouan-speaking groups.

While Oneota – historic Siouan connections are fairly clear in most of the Midwest, specific tribal connections are clear only in a few specific regions. The direct historical link between the Orr phase of northeast Iowa and the Iowa tribe indicates a local continuity and a shared group identity (see item 9, below).

4. There is an abundance of traditional information to support some form of affiliation of Siouan-speakers to the effigy mounds.

Whether or not one accepts the detailed construction of David Smith or more vague mentions of linkages to the effigy mounds, there is a consistent theme among current members of several of the Siouan groups, notably the Ho-Chunk/Winnebago and Iowa, that their ancestors were the builders of effigy mounds. Apparently there are still specific stories or songs specific to some mounds. Indeed, there may be a substantial amount of misinformation as well.

5. Whether the traditional information is from "deep time," taking the affiliation back to pre-Contact times, or whether it is recent will be difficult to ascertain under any circumstances.

Construction of the past is an ongoing process, and any assessment of truth or validity is problematic at best. In the case of the effigy mounds, many events and circumstances are in play to prevent it. Groups have undergone such dramatic culture change and adaptation since European contact that many traditions have been lost. Groups may or may not feel that it is appropriate for some others within their own culture (other clans, for example) to have access to certain sacred knowledge. Groups may feel that it is inappropriate for outsiders to have access to the knowledge. Individuals or groups may manipulate whatever knowledge exists for contemporary reasons. With these factors in mind, there can and will be no archaeological "proof" in the traditional sense of scientific proof.

6. If traditional history is considered to be as important as scientifically derived information in questions of cultural affiliation of effigy mounds, we would urge that all the regional Siouan-speaking tribes be given consideration and they might wish to work jointly on any NAGPRA-related claims.

Although the evidence related here suggests that the Ho-Chunk/Winnebago and Iowa have the most directly linked traditional history about the effigy mounds, too many processes of change and relocation have taken place to reasonably exclude the other Siouan speakers, especially the other Chiwere peoples and the Dakota peoples. The Sauk and Meskwaki make no claim to building the mounds, but given their substantial historical presence in the area, they should be involved in any consideration of claims, especially regarding unidentified and more recent historical materials from the Effigy Mounds region.

7. Many contemporary publics, some of them non-Indian, consider themselves to be affiliated to the effigy mounds, beliefs with which the NPS will have to deal in some way.

Given that other groups have processed their pasts in ways that now incorporate effigy mounds into their definitions of the sacred or their own traditional history, the National Park Service will need to pay attention to these views in their dealings with the non-Indian public. This may be the case for both NAGPRA-related issues and interpretation. Certainly, although there is no reasonable scientific or documentary evidence to support any NAGPRA claims of these groups, such matters may surface as they did in the case of the Kennewick skeleton in the state of Washington with the Asatru Folk Assembly (Thomas 2000:118).

8. Cultural affiliation cannot be determined for those resources at Effigy Mounds National Monument that pre-date the Effigy Mound culture.

The Paleo-Indian, Archaic, and Early and Middle Woodland periods are so far removed in time and traceable relationships that no preponderance of evidence reveals relationships of shared group identity with historic groups. Possible exceptions are the immediately pre-Effigy Mound Lane Farm and Mill phases, which may be local precursors for Effigy Mound.

9. Cultural affiliation for Oneota resources at EFMO is likely to be Chiwere Siouan, specifically Ioway or Oto.

The Orr phase Oneota of northeast Iowa represents either the late phase of a local group continuity congruent with that of the La Crosse locality or a movement from the La Crosse locality (or both), and is identified as probably Ioway or Oto. Pre-17th century Oneota in northeast Iowa may well be ancestral to the Orr phase and thus to these tribes, although the evidence is not as clear.

10. Cultural affiliation for post-A.D. 1650 non-Oneota materials may be established with several tribes.

Groups who lived in the area in the historic era, other than the likely Oneota-affiliated Ioway and Oto, include (for a short period) the Kickapoo, Miami, Ottawa, and Huron; longer occupations extending into the 19th century were established by the Eastern Dakota, Winnebago (Ho-Chunk), and, after ca. 1730, the Sac and Meskwaki.

RECOMMENDED FURTHER STUDIES

Several follow-up studies should be conducted regarding establishment of cultural affiliation and consultation with relevant groups:

1. Dating and cultural affiliation

Further research would be useful to help ascertain cultural affiliation for mounds and features of uncertain age. First, extant collections should be curated and reviewed carefully. Then, new radiocarbon dates can be obtained from currently undated contexts. All of the radiocarbon dates obtained so far for EFMO mounds were run in the 1950s or early 1960s by the Michigan and Isotopes, Inc. radiocarbon labs. Most dates have large standard deviations, and several dates, especially those that were run using the obsolete solid-carbon method, are inconsistent with their cultural contexts and associations. Re-dating of extant samples would provide information important for chronological assignment and determination of cultural affiliation. For example, Mound 55 (13AM82, Nazekaw Terrace) contained Middle Woodland Hopewell-related features and diagnostic materials but was radiocarbon-dated to the end of the Effigy Mound era. Both Mound 24 (13CT18, Sny-Magill) and Mound 69 (13CT26, Marching Bear Group) were dated unacceptably at AD 1520. The new series of dates should include sample identification by a qualified archaeobotanist, and dating should utilize AMS, if feasible, to enable use of small samples.

2. Possible non-Oneota affiliations

The possibility of relationships between Effigy Mound, Kathio, Big Stone, and beyond should be explored for cultural, not just biological, connections.

3. Consultation conference

To obtain further input from the tribes, holding a conference on effigy mounds may prove useful. Invited would be tribal representatives and elders as well as archaeologists and other researchers with experience on effigy mounds and related complexes. The three themes of our integrative model could serve as an organizational framework, and participants can be invited to prepare and circulate pre-conference statements in their areas of interest.

4. Ethnography regarding tribal oral traditions about Effigy Mounds.

Appendix D suggests that more information might be gathered from several tribes regarding tribal oral traditions about the mounds, although it will apparently be limited for the Meskwaki, the Omaha, and the Eastern Sioux. The Ho-Chunk and the Ioway apparently have a substantial oral tradition and sacred knowledge about the mounds, along with concerns about how the information may be used. Perhaps the consultation conference suggested in Item 3 above can be used to develop protocols.

5. Contemporary tribal usage

EFMO should explore how tribes would foresee their contemporary usage of the Monument, e.g., restricting certain parts of the Monument for ceremonies.

6. Non-Indian appropriation

The nature of the Mormon and New Age "constructions" of affiliations with effigy mounds should be explored; are there other such constructions by non-Indians?

POSSIBLE INTERPRETIVE TOPICS FOR EFFIGY MOUNDS NATIONAL MONUMENT

1.Regional archaeology

The most recent information on the age, economy, ideology, and cultural relationships of the Effigy Mound culture should be made an integral part of park interpretation. Likewise, current information on the other cultures represented (especially Middle Woodland and Oneota) should be presented and interpreted.

2. The cultural meanings of mounds

What did and do the mounds mean as symbols, and how do they tie into regional systems of meaning of the Woodland and Mississippian archaeological traditions?

3. What oral tradition and traditional history are and do

Oral history provides a sense of identity for a people and mechanisms for teaching the past, but also stories for guiding people's behaviors. Traditional history provides connections to landscapes, sacred places and the past. Oral tradition and traditional history about effigy mounds might be an ideal situation to demonstrate how it works, by either static display or some level of interactive exhibit.

4. How views of a monument change

Given that the Monument is now in a situation of expansion, and given that in 1999 at the Indian Heritage Festival there was a major re-engagement with American Indians at the site, now might be an excellent time to consider interpreting the changing nature of the monument. The excellent history of the Monument given at the 50th Anniversary celebration could be a part of it.

5. Effigy Mounds National Monument as part of a changing cultural landscape

The Monument sits in an ideal location to interpret how landscapes change culturally and environmentally. It sits at the juncture of a sacred landscape with transportation, environmental, agricultural, and tourism landscapes.